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No. 1

ORIGINAL ARTICLES

GOITER*

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The field of goiter is so wide that one cannot expect to give more than a brief outline in a paper. However, believing that many phases of this common disease are being overlooked, we feel justified in presenting some of the more important features. To begin with, we do not know the cause of goiter and have to define it as a disease of unknown origin, the most common characteristics of which are disturbed function and enlargement of the thyroid gland. In the past there has been a great deal of controversy on the question of classification of goiter, especially among the pathologists. For this reason the clinician has not been able to harmonize the views of the histopathologists, and there has been considerable confusion. With this in mind the American Association for the Study of Goiter adopted a new classification at the annual meeting last year. This classification has the advantage of being simple and if generally adopted will be of value to the general practitioner and the clinician who are not dealing with goiter every day. The classification is as follows:

Type 1. Non-toxic diffuse goiter.

Type 2. Toxic diffuse goiter.

Type 3. Non-toxic nodular goiter.

Type 4. Toxic nodular goiter.

Since we do not know the cause of goiter it is quite possible that the different types of goiter have entirely different etiology. But from our knowledge we do know that one individual can and does have several of the types during a lifetime. In other words, a young girl may

have a slight non-toxic diffuse enlargement in adolescence which recedes until early married life. Then she may have toxic symptoms for a few years, and again her goiter undergo a period of recession. About the menopause nodular lumps may be noted in her neck which produce few symptoms for a time, only to flare up later into a highly toxic nodular goiter with its long train of symptoms such as tachycardia, emotional instability, vasomotor disturbances, and cardiac failure. Of course this toxic condition may occur anywhere along the line, making surgical intervention imperative.

The symptoms and physical findings of goiter vary widely according to the type. In the non-toxic types the enlargement of the thyroid gland may be the chief point of interest. There may be pressure symptoms. The patient may even be the hypothyroid type with excess of weight, sluggish, dull, and with harsh dry skin. Thyroid dysfunction must be considered in very young school children that are physically languid and do not possess mental alertness. The greater per cent of hypothyroid children fall into the group of mild or moderate deficiency and never advance to the stage of cretinism or myxedema. Many times disturbances of the thyroid gland occur without toxic symptoms, especially when associated with a polyglandular syndrome and are most difficult to diagnose and treat. When the toxic goiter is present the symptoms are more constant and these patients present symptoms as follows:

1. Emotional instability. This occurs in practically 100 per cent of the toxic patients and is manifested in the form of talking, anger or weeping.

2. Tachycardia is a symptom that is practically always present. A characteristic of this symptom is that it is not reduced by sleep. Exercise sends it very high.

*Read at the 74th annual meeting of the Kansas Medical Society, Kansas City, Kansas, May 3, 4 and 5, 1932.

3. Cardiac symptoms such as extra-systole, auricular fibrillation, and cardiac decompensation. These symptoms are found more often in the toxic nodular goiter patients, probably due to the fact that these people have been subjected to an extra load on the heart over a longer period of time.

4. Vasomotor disturbances. The symptoms are characterized by profuse sweating, coldness of the extremities, loss of hair in patches, and blushing of the skin over the chest.

5. Loss of weight. Usually this is a sudden loss and then a slow gain back to normal, which then drops again suddenly, and this is often with an increased food intake.

6. Tremor. The fine tremor is seen in over 50 per cent of cases. If the tremor is not found in the hands it is sometimes found in the foot.

7. Staring. The staring expression of the eyes is found in practically 100 per cent of toxic patients.

8. Exophthalmus. This condition is present in about one-third of the toxic diffuse goiter patients and in a much smaller per cent of the toxic nodular types.

9. Enlargement of the thyroid. Many of the most severe cases have none. Careful palpation will reveal enlargement in most cases.

10. Blood pressure. The systolic may not be high but there is usually a high pulse pressure.

11. Fatigue. There is often fatigue, especially of the quadriceps group of muscles. The knees are weak.

12. History of diarrhea, with or without vomiting and without apparent cause.

13. Some of the other eye signs may be of some value, that is, Graefe's sign where the eyelids fail to follow the eyeball downward; Stellwag's sign where there is a lessening of involuntary winking, and Dalrymple's sign where an increased palpebral fissure is noted without an actual exophthalmus.

14. Basal metabolism rate. The value of the basal metabolism rate is the subject of much discussion. I will quote some opinions. "The B.M.R. is of great

value in toxic goiters, but not in the adenomatous group. Pay little attention to the B.M.R. in thyroid surgery except in the very high or the very low."—Pemberton. "In adenomatous goiter with high pulse pressure, etc., pay little attention to the B.M.R. Operate if the patient shows these symptoms."—Yung. "The B.M.R. gives us the greatest help in older people."—Plummer. "When a doctor lets a machine do his thinking for him he is going to get into trouble."—King.

Here is a variety of opinions but the fact remains that no basal metabolic instruments are being discarded, but like all other laboratory tests must be interpreted properly in each case to be of value.

The differential diagnosis of goiter may at times be difficult. Tuberculosis may be thought of at first in these cases but can as a rule, be ruled out without difficulty. The neurotic patient may be thought to have goiter on casual examination. But the neurotic woman strives to create the impression that she is very ill, while the goiter patient as a rule minimizes her trouble and tries to carry on. In neurosis a long story of suffering is related which is exaggerated; the woman with goiter may talk to some length, but her viewpoint of life is very much opposed to that of the neurotic. The so-called neurocirculatory asthenia, or the effort syndrome group, must be ruled out. The pulse in these patients is high but it comes down to normal with rest. In toxic goiter the pulse is high even during sleep. The polyglandular dyscrasias are confused with goiter at times and are probably the most difficult to rule out when encountered. Fortunately polyglandular dysfunction that closely simulates goiter is rare.

One should emphasize the early diagnosis of goiter and not wait for the chronic invalidism which usually occurs under prolonged medical treatment, when the gland is allowed to "burn out." Too frequently it is the patient who burns out. Dr. Goetsch of Brooklyn has recently published the results of a remarkable piece of work that he has done over a period of the last five years. Dur-

ing this time it has been his custom to remove a section of the superior thyroid artery, for study, while doing a thyroidectomy. His slides and conclusions in these studies are very convincing. In the early cases, those who have been subjected to hyperthyroidism for a short time only, show hypertrophy of the smooth muscle of the media with often an increase of the fine elastic fibrils between the muscle cells. The compensatory changes are needed to stand the increased pulse pressure. During the early stage the intima is stretched. Its fenestrations, or crenations, are smoothed out by the wide excursions of the arterial wall, but it does not rupture during the early stage, as the condition progresses the hypertrophy of the media weakens and breaks down, and then the function of holding the straining bloodstream is taken over by the intima which is unsupported by the media. Rupture of the intima now takes place and compensatory repair immediately sets in. New connective tissue acts as patches of support between the broken ends of the internal elastic membrane thus preventing further dilatation and possible rupture of the artery. This repair goes on as the disease progresses until there is an actual narrowing of the lumen of the blood vessel instead of a dilatation. This accounts for the disappearance of the thrills and bruits characteristic of the earlier phases of hyperthyroidism. These changes are not confined to any particular type of goiter but occur in any goiter that is toxic. Dr. Goetsch concludes: "It behooves us then to relieve hyperthyroidism as soon as possible in order to preserve the youth of the patient as well as her arteries, for if a patient is as old as her arteries, hyperthyroidism can make both her and her arteries two or three decades older than her real age."

The only medical treatment for goiter at the present time is iodine, and there are very well defined indications for its use. The first indication for prescribing iodine is in regions where goiter is endemic. It should be given to children in doses of 10 milligrams per week, preferably in the schools. This, in a tablet

form, is sufficient to prevent goiter in children ranging in age from five to seventeen years. The second indication for the use of iodine is in the form of Lugol's solution given to pregnant women with goiter for the protection of the child. The third use is in the preparation of toxic patients for thyroidectomy. Lugol's solution is probably best and should be given over a period of from one to two weeks. It is over this period of the first two weeks that the maximum results are attained. Further use may protect the patient to some extent, but as the toxic condition progresses with the use of the iodine, we lose the great value of our best weapon in preparing a patient for thyroidectomy. She may become iodine fast, so that iodine is useless in preparing her for surgery.

Careful preoperative study and treatment accounts largely for the present low mortality in thyroid surgery. A careful history should be taken and thorough physical examination is necessary. One should gain all the information possible about the thyroid patient. Then if toxic, the rest period in the hospital should be started, preferably when the B.M.R. is decreasing and the patient is starting into a period of recession. At least the Lugol's solution is best started during a period of recession. Laboratory work in the hospital should include an *x*-ray of the chest and neck. While the *x*-ray is not always satisfactory in diagnosing intrathoracic goiter and tracheal pressure, it gives definite information as to lung metastasis in malignancy. Diet and fluid intake are important during the rest period. The diet should consist of a minimum of 5,000 calories of easily digested food and the fluid intake should be from 3 to 4 liters per day. The surgeon should use this rest period to gain the confidence of the patient, and to allay fear of the coming operation.

Lugol's solution is given in doses of from 10 to 15 minims three times a day and in addition to this, sedatives are usually necessary. Sodium bromide, luminal, or amytal are adequate unless cardiac complications are present, when morphine may be given. The rest period of from ten to twelve days which gives

the maximum benefit to be obtained from Lugol's solution is not sufficient time in cardiac cases, and this time should be extended for possibly some weeks after the heart is functioning properly. The patient that is brought into the hospital in a thyroid crisis presents an entirely different situation. The problem here, of course, is saving a life, and all other considerations are pushed into the background. The extremely rapid pulse, restlessness or stuporous delirium, flushed and perspiring skin, with frequent vomiting and diarrhea, give warning that emergency measures are necessary. There is rapid loss of water through perspiration, vomiting, and diarrhea, as well as from the increased katabolism, that rapidly leads to acidosis and profound toxemia. Lugol's solution should be given in 30 minim doses by mouth or per rectum every four hours day and night. One hundred grams of glucose is administered in one liter of physiological salt solution intravenously every twelve hours, and this is probably used to greatest advantage if given slowly by the drip method over a period of about four hours. Two liters of physiological salt solution subcutaneously is prescribed for each twelve hour period. If the delirium is not too severe the patient may be fed a diet of concentrated high caloric value. If the patient can be made to tide over a few days the condition generally improves to the extent that the treatment may be brought down to that of the average severely toxic patient.

Some general rules must be set down as to the time when the operation should be done. When there is no evidence of cardiac disease and the patient is under forty years of age, not particularly apprehensive, weight stationary or gaining, with pulse under one hundred and basal metabolism rate under plus forty, conditions are generally satisfactory for operation. Where cardiac complications are present it is well to use plenty of time, allowing the patient some exercise and checking carefully to see just how much heart reserve is present. When operation is decided upon 30 grains of sodium bromide and $\frac{1}{2}$ grain of codein is given the night before. A soapsuds

enema and 30 minims of Lugol's solution are also administered.

On the morning of operation 6 grains of sodium amytal are prescribed two hours before operation and one-sixth to one-fourth grain of morphine per hypodermic one-half hour before. We use a one per cent solution of novocain, one to two ounces, depending on the size of the field to be injected, with never more than six drops of adrenalin chloride for the whole amount of solution.

Many surgeons use nitrous oxide and oxygen in this operation with much satisfaction, and no doubt where proper teamwork is worked out between the surgeon and the anaesthetist this method is very good. One claim for gas oxygen is that it is easier on the surgeon to have the patient asleep most of the time. However, under local anaesthetic we do not find the conversation of the patient annoying, nor does it divert the attention necessary for carrying on the operation. We find that they fall asleep at times, but can be aroused readily for conversation when work is being done near the recurrent laryngeal nerve.

The amount of tissue to be removed is always a question that is uppermost in the mind of the surgeon and requires nice judgment as there are no definite rules that can be laid down. The amount to be removed varies with toxicity, age of the patient, and the type of goiter. In non-toxic goiter there should never be more than the normal amount of thyroid tissue left behind. In the toxic types we believe that Richter is near to the proper procedure in doing what he calls the ultra radical operation. I'm sure that we all have seen more trouble from leaving too much tissue than from leaving too little. Richter argues that if we would take out enough tissue in the first place, planning on a certain amount of hyperplasia of the gland following operation, it would not be necessary to give Lugol's solution as a part of the postoperative care.

We try to make our operative technique as simple as possible, probably following Poole of the New York Hospital and Richter of Chicago fairly closely as to methods. Many other procedures

are probably just as good, especially in the hands of the surgeons that devised them. A few things are necessary in the removal of a goiter, namely: expedition, control of hemorrhage, adequate removal of thyroid tissue and preservation of the parathyroid glands and the recurrent laryngeal nerve. Briefly our method is as follows:

1. Incise through skin, fat, and platysma down to deep fascia and free the flap high.

2. Ligate the veins of the fascia and cut through.

3. Separate the ribbon muscles and free their fascia from the sternomastoid.

4. Free each lateral lobe and pyramidal lobe above of fascia. Cut the sternothyroid muscle loose from upper attachment if necessary. This will render it unnecessary to cut the sternohyoids in most cases as their attachment is much higher and they retract well.

5. Pass curved forceps under isthmus, cut through to trachea and free to sides of trachea.

6. Ligate superior thyroid artery between clamps.

7. Ligate lateral vein and lower vessels.

8. Lift whole lobe and resect as necessary. Mattress suture and running suture closure of the gland.

9. Sternothyroids are brought together in midline after lateral drains of rubber dam are brought through them just anterior to the sternomastoids.

10. Fascia is closed with number two chromic catgut and the skin is closed with skin clips loosely applied.

In regard to postoperative care there are a few points that should be observed. The patient is taken from the operating room and put to bed in a comfortable position with the back rest raised. The use of Lugol's solution after operation, while not held in high esteem by Richter, is of considerable comfort to most of us in avoiding postoperative storm. Ten minims of Lugol's solution three times a day is enough to ward off danger but in more toxic patients this amount should be increased. Usually Lugol's solution is continued for about three months with the idea of playing safe and preventing

a too active hyperplasia of the gland. Immediately after operation fluids must be given freely, and if vomiting is present hypodermoclysis of physiological salt solution should be administered. We remove the drains and clips usually in 24 hours, at the same time applying strips of adhesive, cut narrow in the center, to prevent spreading of the wound. These strips are kept on for about three weeks. Early removal of the drains and clips prevents disfiguring scars. The lateral drains usually prevent the adhesion in the midline that disturbs the surgeon as well as the patient following thyroid surgery.

The thyroid patient should be instructed to avoid over-exertion, strain, and worry over a long period of time. As some one has aptly expressed it, she should go in "second gear," from one to three years following thyroidectomy. The surgeon should give her advice along these lines, for his responsibility does not cease when the patient leaves the hospital. Rest periods should be arranged in the day time as well as plenty of hours in bed at night. We must not lose sight of the fact that goiter is a clinical problem and that it should be studied carefully. It makes little difference whether it is the internist or the surgeon that studies the case, so long as the case is really studied. Keep in mind the increased cardiac output in hyperthyroidism and what it does to the patient. Keep in mind the disturbances of the nervous system and advise accordingly.

It seems quite probable that we are on the verge of some great discoveries bearing on the treatment of goiter. Within the past year there has been a vast amount of work done on the glands of internal secretion closely associated with the thyroid. Cortin has been isolated and some new substances have been extracted from the pituitary body. It is quite possible that we are near the discovery of something comparable to insulin to be used as an inhibitor of the thyroid gland, and that in the future thyroid surgery will not be necessary. But at the present time, and until some such substance is found, surgery is the best we have to

offer the patient. Aside from active interference our results are not brilliant.

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ALLERGY AND ITS RELATIONSHIP TO THE RHINOLOGIST*

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I have chosen this subject for two reasons: First, because of its comparative recent introduction to the profession as a definite cause of pathologic lesions, which produce symptoms that heretofore have been attributed to something else; secondly, because of the close alliance of allergic patients to the rhinologist and the difficulty which is encountered in treating such a patient.

The history of allergy or hay fever is rather old. The first to recognize the syndrome of symptoms that characterize hay fever was an English physician, who was a subject himself. He noted the seasonal appearances and associated it with pollenization of hay, hence the name. Others tried to make an antitoxin, such as is used in diphtheria, by injecting pollens into animals with the idea of using the blood serum as antitoxin, which would be specific for the particular pollen injected, but all proved a failure. Some years later definite steps toward desensitizing patients against pollens met with more favorable results, but it is only recently that steps have been made to arrive at a scientific classification and treatment of this troublesome disease. Allergy, as it is now called, covers a larger field and comprises conditions of sensitization not only to pollens but to foods and many other substances. Heretofore the profession did not realize that many symptoms can be definitely traced to sensitiveness to foreign proteins.

Theories of Allergic Mechanism—When the exciting agent or allergin comes in contact with the antibody or allergin in these sensitized cells a colloidal shock reaction is believed to occur, resulting in the production of lesions and symptoms. This is the so-called cellular theory and so many facts have been

accumulated in support of it as the underlying mechanism, that it has been quite widely accepted.

If the above principles are brought into reality it simply means this: An allergic person is one who is capable of producing an antibody when brought into contact with one or more specific proteins. This process is just the reverse in other infectious diseases, such as diphtheria where the antibody affords protection, whereas in allergy they produce the symptoms. The reason for this is not known. Also the hereditary aspect is not well understood, but we know some children die from anaphylactic shock after the administration of serums, who have never had a previous injection of any type of sera.

Pathology—The histopathologic changes occurring in the nose and sinuses in allergy are:

1. Epithelia: Thickening hyperplasia and polypoid degeneration.
2. Tunica propria: Eosinophilic infiltration, edema and varying amounts of mononuclear cells, round cells and lymphoid cell infiltration.
3. Connective tissue: Dilatation, thickening and compression of the blood vessels.
4. Periosteal layer: Round cells and connective tissue proliferation.
5. The bone: Hyperplastic and rarefying and atrophic process.
6. The nose and sinuses: Gross polypus formation, eosinophilic infiltration in the mucous membrane in the nose and sinuses and dilatation of mucous and serous glands.

The diagnosis of the seasonal type is usually quite easy as the patient complains of all the classical symptoms, but the difficulty arises in the diagnosis of the perennial type. The history is of prime importance not only the personal history but the family history relative to the incidence of asthma, hay fever, and hives. The personal history of sensitiveness to various foods, abnormal amount of sneezing, blocking of the nasal passages and persons with so-called persistent cold in the head, itching of the post-pharyngeal wall and eustachian tubes and eyes.

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Explain to your patient what you are trying to ascertain and have him to be on guard and notice anything about his regular habits that will precipitate or antagonize these attacks. In many instances you will find a clue from which to start. It requires the ingenuity of a detective to ascertain and deduct from this information something that will aid you in making the diagnosis. Complete blood count, especial attention to the eosinophiles, the percentage being usually over 7 per cent in this condition. One case that came under my observation reported 14 per cent. The blood calcium is usually low, and also the examination of nasal secretion for the presence of these eosinophiles is important.

Symptoms that the usual patient presents to the rhinologist are:

1. Sneezing, which in a large percentage of cases is present. They will sneeze twenty to thirty times without interruption, usually on arising in the morning, but may have several attacks during the day.

2. Burning and itching of the eyes may be present. Itching of the post-pharyngeal wall and eustachian tubes may also be complained of. This and the itching between scapulae is pathognomonic of beginning asthma.

3. Nasal discharge is always present. The patient complains of persistent cold and uses many handkerchiefs during the day.

4. Obstruction of nasal breathing. Both nostrils are obstructed most of the time but there may be a period when one nostril is open or free. This is always associated with watery discharge. The nasal obstruction may be mild or intensive depending on the duration of the attacks.

5. A sense of fullness in one or both ears.

Examination of nose and sinuses shows large boggy turbinates. The mucosa is of a pale grayish glistening appearance. The nasal cavity is filled with clear mucoid secretions, nose is hypersensitive and the edema not only affects the turbinates but all the nasal mucosa. If the process is an old one you may see small polyps in the middle

meatuses. Posterior rhinoscopy reveals edema of the mucosa of the lateral walls especially at the eustachian orifices. Generalized anemic appearance of the whole epipharynx.

Sinuses, in the early stages may be clear on trans-illumination and on *x-ray* examination, but as the condition advances the antra and ethmoids become cloudy; this is a part of the same process that you see in the nose. On irrigation the fluid is usually returned clear or on a microscopical examination may show pus cells.

Differential Diagnosis—There are few conditions which simulate perennial hay fever:

1. Common colds or coryza.
2. Sinus infections.
3. Cerebrospinal rhinorrhea.
4. Mechanical defects.

In coryza the onset is insidious and runs a definite course of three to five days, beginning with a burning sensation in the back of the throat followed by a thin watery nasal discharge, some lachrimation and nasal obstruction. The discharge at first is thin and irritating to the skin then becomes more viscid and later purulent; it is usually associated with headaches and general malaise, some temperature, aching of the muscles and joints. The throat is sore and laryngitis may also be present. In perennial hay fever the attacks develop suddenly. It may only last a few hours. The discharge is always thin. There is no temperature or symptoms of malaise. Itching of the eyes and post-pharyngeal wall is usually present. Hay fever is not infectious and transferable as is coryza.

Sinus Infections—Usually a history of previous similar attacks of a recent upper respiratory infection. Examination of the nose shows a highly congested mucosa with pus present at the middle meatus, headaches and pain over the affected sinus. *x-Ray* and trans-illumination will naturally help in differential diagnosis.

Nasal Diseases due to Mechanical Defects—Marked septal deflections infringing on the turbinate will produce sneezing, clear nasal discharge and nasal obstruction, but usually no itching is pres-

ent. On examination the deformity can be easily recognized, also the absence of allergic history is another point in differential diagnosis.

Cerebrospinal rhinorrhea is such a rare condition that I only mention it in passing, as a possible condition simulating perennial hay fever.

TREATMENT

Symptomatic—Local treatment to the nose is purely palliative; no permanent relief can be obtained. The use of ephedrin in its various forms relieve the nasal congestion for a short time and in some instances I have found that the prolonged use of ephedrin produced an irritation, and instead of relieving the symptoms, aggravated them. In many cases I have found the cocainization of the sphenopalatine ganglion and an application of a strong silver solution to the ganglion afforded the best protracted relief. This is brought about by the reduction of sensitiveness of the nasal mucosa by blocking its nerve supply. In other cases where the ganglion is deeply situated or the thickened mucosa prevents the anaesthetization of the ganglion, injection of this ganglion through the posterior palatine foramen will answer the purpose. This form of treatment is especially adapted for the seasonal type. As I mentioned before no permanent relief can be obtained, as literature and my short experience shows that operative interventions are contraindicated and usually prove to be unsatisfactory. The removal of polyps, the irrigation of antra should be done if indicated, but outside of these two simple procedures no other surgery should be attempted.

Curative—With the typical history, physical findings and laboratory data all pointing to a condition of allergy, then these patients should be referred to one who is proficient in the technic of testing for sensitiveness to proteins. If it be a seasonal variety the time of the onset of symptoms will naturally classify these patients and should be subjected to dermal testing of pollens that are prevalent at that particular season. If it be a type of perennial hay fever the history will also aid you in determining what pro-

teins should be looked for, but in this condition it is wise to do a complete examination of all proteins including foods, animal dander, or house dust.

There are some patients whose dermal reactions will be negative and that type should be subjected to the intra-dermal test as it is possible to bring out a reaction by this method, whereas a dermal test would read negative.

The systemic treatment is also advantageous such as cod-liver oil, viosterol and good elimination. If these patients are studied carefully by the allergist in co-operation with the rhinologist splendid results will be obtained in a large percentage of cases. The rhinologist, if he has the time, can work out these patients himself, but it has been my experience that the best results can be obtained by one who has made a special study of this subject, because the methods of regulating the dosages and the thoroughness of the testing is of great importance, as no two patients react similarly. Each case has to be treated as an identity. The desensitizing process should be continued throughout the year, especially the seasonal type. Out of season an injection of one-quarter to one-half of the largest doses should be given at monthly intervals. This is the so-called perennial type of treatment and has found many supporters in the past year.

In conclusion I would like to emphasize the following points:

1. Complete history in suspected allergic patients.
2. Conservativeness in any surgical procedure of the nose and sinuses.
3. Complete dermal testing in all suspected cases.
4. Close co-operation between the rhinologist and the allergist.
5. Local treatment cannot afford permanent relief and if such a condition exists the rhinologist is greatly handicapped without the aid of an allergist.

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REDUCING SUBSTANCES IN THE URINE

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The diagnosis of diabetes mellitus based only upon the finding of a reducing substance in the urine is as hazardous as it is unscientific. The subsequent, oftentimes frantic effort to clear the urine of this substance by restricted diets and even by the use of insulin may prove to be a gross injustice to the patient. Even when an isolated blood sugar determination is done this situation may not be greatly altered. Accurate diagnosis is the master craft of medicine and accurate clinical judgment is the master mind of diagnosis. Laboratory data are never of sufficient weight to completely over-ride good clinical judgment. The purpose of this paper is to endeavor to point out that the presence of a reducing body in the urine does not in all cases mean that diabetes mellitus exists as its cause, that that body may not even be glucose, and that it is entirely possible for the disease to exist and for it not to manifest a reducing substance in the urine at a given time.

May we define a reducing substance as that body which, when heated in a strongly alkaline medium, reduces cupric hydrate of reagents as Benedict's or Fehling's to cuprous hydrate, a yellow precipitate, or to cuprous oxide a red precipitate. Benedict's reagent is perhaps the most stable and hence the most dependable one to use for the detection of reducing bodies. Five cubic centimeters of this reagent when boiled for two minutes with eight drops of urine will indicate the presence of reducing substances by the development of green, yellow, and red precipitate in order as the concentration of the bodies increase. Glucose in concentrations of .2 per cent or more visibly reduces the copper. On cooling .15 per cent will give a positive reaction. This proves to be a rather sensitive reagent when one considers that the normal urine contains .01 per cent to .07 per cent glucose. Fehling's reagent indicates sugar in concentrations of 1.0 per cent or more.

A patient has presented himself and a reducing substance has been detected in his urine. What are the possibilities? When the clinical findings in addition to this reducing body are consistent with those of diabetes mellitus, such a diagnosis may be justified, but, even in such an event, that diagnosis should be confirmed by a glucose tolerance test. There are, for all practical purposes, eight different substances which could be responsible for a positive Benedict's reaction. The first and most important of these is glucose, dextrose or grape sugar. Second in importance are the three sugars, lactose, levulose, and the pentoses. Third, maltose may exist. Lastly, there are glycuronates, alcapnone bodies, and urates. Many different schemes appear in the text books for the purpose of identifying these eight different reducing substances. For the completeness of discussion those bodies of lesser importance may be dispensed with briefly to clear our minds of their apparent or questionable innocence. Urates have no significance as such to this paper. Alcaptonuria is usually a congenital, persistent and rare disease which is due to an anomaly of protein metabolism (tyrosin). A body which reduces the copper of Benedict's but not the bismuth subnitrate of Nylander's is either urates or these alcapnone bodies. Alcapnone turns the urine black on standing or when an alkalae is added to it, and it is not fermented by yeast. The relation of alcaptonuria to achromosis is illustrated by Osler's case which had been diagnosed as diabetes by some European authority on that disease. Glycuronates are probably non-pathological substances resulting from processes of detoxification. These glycuronates are not fermented by yeast and may be identified by the naphthoresorcin—HCL—ether test. Pentosuria may be an anomaly of carbohydrate metabolism, a harmless evidence of alimentary pentosuria from ingestion of large amounts of such fruits as apples, plums, or cherries, or it may coexist with glycosuria in severe diabetes mellitus. The pentoses are not fermented by yeast and may be identified by the Orcinol test. Maltosuria is very rare and is questionably related to interstitial

lesions of the pancreas. Maltose forms an osazone more soluble than glucosazone, and although it is not easily differentiated from glucose, it will be found that when maltose is heated with a dilute acid that its reducing powers are increased. Levulosuria may be essential or it may exist as an alimentary type. Levulosuria is produced in 26 per cent of normal individuals on ingesting 100 gms. of the sugar. It is not infrequently associated with glycosuria in diabetes mellitus. These so-called mixed meliturias are said to indicate a guarded prognosis in diabetes. Levulose reduces copper and is fermented by yeast but may be identified by Seliwanoff's test. Lactosuria is a harmless occurrence in many pregnancies and in nursing mothers, probably due to mastic reabsorption. It is said to occur in many people on an exclusive milk diet. The difficulties incurred unnecessarily in the over treatment of a supposed diabetes in a pregnancy with a harmless lactosuria and conversely the dangers incurred in ignoring it when present makes it imperative to distinguish lactose from glucose. Both reduce copper. Yeast ferments glucose but not lactose, and Rubner's lead acetate and ammonia test is a further confirmation of the presence of lactose and a technique easily applied. In considering the last of these reducing bodies, that is glucose, the most important subject of glycosuria arises.

GLYCOSURIA

The two basic causes of glycosuria are hyperglycemia and a low or lowered renal threshold. Normally the kidney is impermeable to glucose when the blood sugar concentration is .170 per cent or less, and when this concentration of .170 per cent is exceeded, glycosuria results and the normal renal threshold for glucose is said to have been reached. This threshold is altered in various abnormal conditions. It is often elevated in nephritis and in some cases of diabetes mellitus. This threshold is often lowered in pregnancy. Renal glycosuria or normoglycemic glycosuria incorrectly termed renal "diabetes," is a harmless apparently hereditary disease in which glycosuria exists because of a low renal

threshold. Drugs such as phlorizine are productive of glycosuria by lowering the renal threshold.

Hyperglycemia is the basic cause of all other glycosurias except those cases which, of course, could be partly responsible to both a lowered threshold and an elevated blood sugar. To consider those factors which elevate the blood sugar above .170 per cent is to consider the causes of the remaining glycosurias.

First, such an abundance of sugar ingested, 500 gms. or more as to flood the liver beyond its capacity to form and to store glycogen results in hyperglycemia and glycosuria. This alimentary type, however, is not produced in normal people regardless of the quantity of ingested glucose. It is enhanced by alcohol, certain poisons, by infections, and is hindered by physical exertion.

Second, excessive unloading, mobilization, or hepatic glycogenolysis resulting from sympathetic stimulation can elevate the blood sugar above the renal threshold and glycosuria results. These glycosurias may be produced by injuries to the central nervous system as Bernard's medullary puncture, by epinephrin as the hyperadrenalism of emotions and nervousness, by hyperthyroidism, and by hyperpituitarism as the glycosurias seen in acromegalias.

Third, either the decreased utilization of sugar by the tissues or the defective glycogenesis in the liver may affect an hyperglycemia and glycosuria. These combined may help to explain the glycosuria of diabetes mellitus. The suggested mechanism involved in the production of the glycosurias of certain drug overdosage as nitrites, morphine, phosphorus, carbon monoxide, and many more cannot be more fully considered here.

The patient has a glycosuria. The chief causes of that condition are recalled. Other concomitant findings may suffice to classify it. There may be a brain injury, history of carbon monoxide poisoning or other events to which the glycosuria would be secondary. However, the only procedure upon which an ultimate true diagnosis can be concluded in most all cases is that of determining, quantitatively, the blood sugar response,

and qualitatively the reducing substance in the urine resulting from the ingestion of a given quantity of glucose given under controlled circumstances.

THE GLUCOSE TOLERANCE TEST

The technique of this test is as follows:

1. No food after 7 p.m.
2. Following morning at 7 a.m. obtain fasting blood, and give by mouth 100 gms. glucose.
3. Obtain blood at one-half, one, two, and three hour intervals.
4. Collect twenty-four hour urine specimen if sugar is qualitatively present and analyze quantitatively for glucose.
5. Isolate 5-10 c.c. of urine at each venipuncture time for the qualitative Benedict's. Fluids are to be given in such quantities as to assure specimens.
6. Plot a curve of the blood sugar values and indicate the presence or absence of glycosuria at each period.

The normal response to such a test is a curve such as shown in figure one.

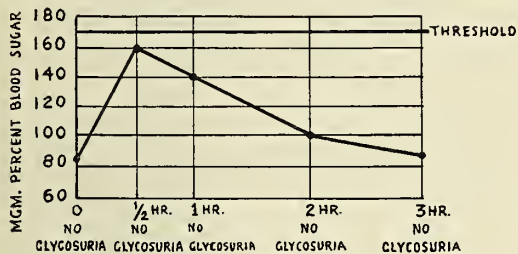


FIGURE ONE
CURVE OF NORMAL RESPONSE TO SUGAR TOLERANCE TEST

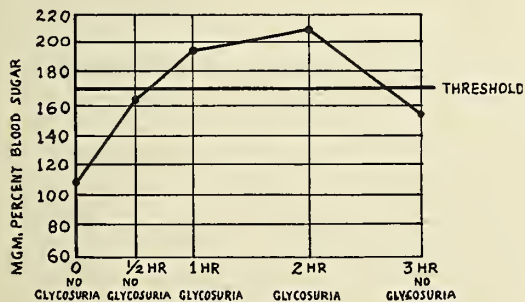


FIGURE TWO
DIABETES MELLITUS WITH NORMAL RENAL THRESHOLD

The cardinal facts to be remembered in reading these curves are that the normal fasting blood sugar is between .080 per cent and .120 per cent, usually at the lower limit of this range, and when at or much above .120 per cent is alone

suggestive of diabetes mellitus; that the peak of the rise appears in the first 30 to 45 minutes and is to a maximum of approximately .160 per cent; that this curve returns to normal limits in two to three hours, usually two; and that at no time does glycosuria occur. The urine is clear because the peak of hyperglycemia is yet under the threshold.

The response in patients with diabetes mellitus to the glucose tolerance test is variable depending upon the severity of the disease and upon the associated renal threshold. A mild but definite case with a normal threshold would probably have a curve as shown in figure two.

The two most consistent features characterizing such curves are, first, the delayed arrival at the maximum blood sugar concentration usually about two hours and, second, the delayed return to normal limits (four hours or more). In figure two it is seen that the fasting blood sugar is within normal limits; that the half hour blood sugar is within the normal alimentary rise but that the peak is reached at two hours, and that normal concentration of blood sugar is still exceeded at the end of three hours. These last two are the diagnostic features. The curve also shows that glycosuria occurs only when the renal threshold is exceeded, which in this as in most early cases is unchanged. Diabetes mellitus of long standing usually has an elevated threshold maybe .300 per cent or above but, however, may demonstrate lowered ones. These more severe types of the malady show curves with progressively higher concentration of the blood sugar in all samples in proportion as the severity of the disease increases but retain those characteristics of delayed maximum rise and delayed return to normal level, or better, to the level of the fasting blood. At the extremity of the disease the curve may flatten out into a straight line at .300 per cent or higher and this with persistent glycosuria. May we now repeat our introductory statement that casual blood sugars and ill chosen periods for the collection of urine samples when analyzed may yield data that could be spoken of as false negative, especially in mild cases, is this true of the blood sugar determina-

tion; and the urinalysis for glucose is never always decisive of itself even in moderately severe cases. Insurance companies or physicians who propose to rule out diabetes mellitus by a single blood test or urinalysis will be favored with the highest percentage of success that is allotted to such a short cut method if these specimens are collected two hours after a glucose test meal.

Normoglycemic glycosuria curves are of two types, continuous, figure three, or cyclic, figure four.

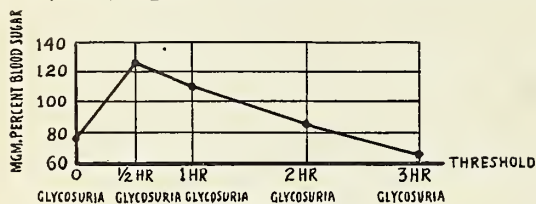


FIGURE THREE
NORMOGLYCEMIC GLYCOSURIA, CONTINUOUS TYPE

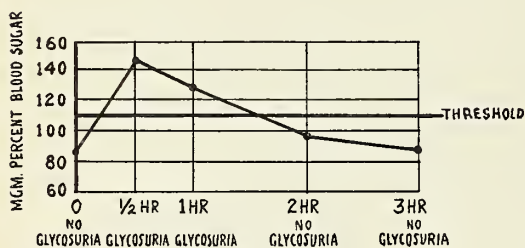


FIGURE FOUR
NORMOGLYCEMIC GLYCOSURIA, CYCLIC TYPE

The continuous type manifests a persistent glycosuria as the threshold for sugar is below the concentration of the fasting blood sugar. In the cyclic type the threshold is, of course, below the normal but is, however, above the fasting blood sugar level for the given patient and the spilling of glucose is consequently periodic. Blood sugar concentration in these cases never exceeds the normal for the given period hence the term "normoglycemic." The disease is probably an hereditary characteristic, is a perfectly harmless affection of certain individuals and is the malady which is most often mistaken for diabetes mellitus as the possibility of finding a reducing substance in the urine at any given time is unparalleled among the disease showing innocent and nondiabetic glycosurias. This lowered threshold of renal glycosuria cannot be altered, glycosuria

usually persists, restricted diets are an unjustified abuse and insulin is injurious. Picture the "truly frantic effort" to clear these glycosurias by trying to drive the blood sugar level of these patients (e.g. with the continuous type) into an hypoglycemia below the fasting concentration of that food element in the blood which element even then may defy you by continuing to leave the body through the urine, and you see a patient starved, underweight, manifesting a protean variety of signs and symptoms from "hypoglycemic epilepsy" to drenching "hyperhidrosis universalis" of insulin shock. The patient enduring these probably severe but hopeless "efforts" supposes these calamities to be the terminal strokes of the dreaded "sugar diabetes." He adjusts his future accordingly and reshuffles his insurance policies. This is all easily reversed by advising frequent small meals and endeavoring to correct the mental delusion which is usually difficult in patients who have dieted say for three years and who have read all the available lay literature on diabetes mellitus. These two bits of advice, if followed, invariably produce both a "cure" and a friend.

Alimentary glycosuria, figure five, is difficult to evaluate. The fasting blood sugar is low and the half hour blood sugar concentration is abnormally high but the curve returns to normal in the normal period. Wilder prefers to call this condition alimentary hyperglycemia indicating that glycosuria following meals is usually of the renal type. Maclean calls this the "lag" type and suggests its being related to diabetes mellitus. The stability of the glycogen storage mechanism whether related to insulin or not may be an explanation. Wilder indicates that the curves obtained in hyperthyroidism are usually of this type. Todd speaks of the similarity between the curves of the "prediabetic" and of hyperthyroidism.

The so-called diabetes innocens, figure six, is a curve showing a normal fasting blood sugar, delayed arrival at the peak (one to two hours), and a delayed return to the normal blood sugar concentration for glucose. These last two characteris-

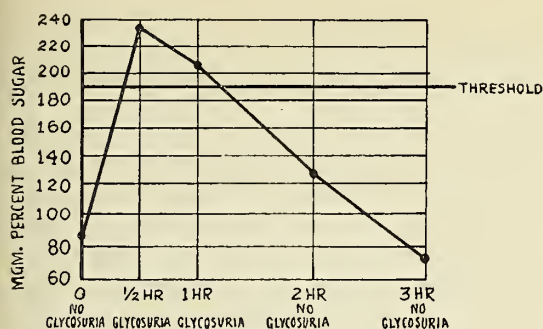


FIGURE FIVE
ALIMENTARY GLYCOSURIA

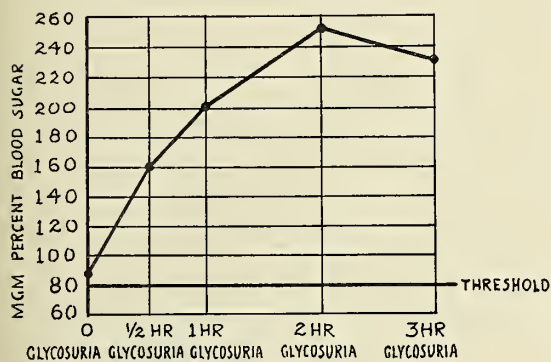


FIGURE SIX
DIABETES INNOCENS

ties, the delayed peak and the delayed return to normal are those peculiar to the curves of true diabetes mellitus and from which disease the so-called diabetes innocens cannot be differentiated merely by the glucose tolerance test. The additional characteristic of a persistent glycosuria is also consistent with diabetes with a low renal threshold. As the literature states, in cases of diabetes innocens which have been followed for several years and in which the clinical picture of diabetes is persistently absent, especially in young individuals in whom the disease usually progresses rapidly, such a diagnosis may be in order. I should like to suggest that, although both the diagnosis of alimentary glycosuria and of diabetes innocens are made and justified after long and uneventful observation, the only safe course to pursue in these cases is to apply such methods of treatment to them as is applied to true diabetes mellitus.

Our last consideration is the rather mooted question of the significance of reducing substances in the urine of the

pregnant. Lactosuria is considered above. Renal glycosuria has its highest frequency in pregnant women, is usually not severe and may be present from the first month through delivery and the first few weeks of puerperium. Pregnancy is believed to lower the renal threshold of most women. The frequency of renal glycosuria in pregnancy is suggested by the fact that a demonstration of its presence has been advanced as a "test for pregnancy." The frequency and apparent innocence of this type of glycosuria has had a tendency to create an attitude of indifference on the part of some to the finding of reducing bodies in the urine of the pregnant. This attitude could only result in the overlooking of cases of true diabetes mellitus a disease which often-times makes its first appearance in women during their pregnancies. In contrast to the above there are those who are ever overzealous in treating by diets and insulin those cases of renal glycosuria supposed to be true diabetes mellitus. Both extremes are, of course, undesirable. The exact status of the patient can be determined and the patient treated accordingly.

SUMMARY

1. Eight different bodies that may exist in the urine and be responsible for a positive Benedict's reaction are reviewed.
2. The basic causes of glycosuria are recalled.
3. The technique of the glucose tolerance test is presented, and the response to such a test in the following conditions described:
 - A. Normal
 - B. Diabetes mellitus
 - C. Normoglycemic glycosuria—continuous and cyclic types
 - D. Alimentary glycosuria
 - E. Diabetes innocens
4. The significance of glycosuria in pregnancy is considered.

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I

A MESSAGE FROM THE PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION*

E. H. CARY, M.D.
Dallas, Texas

The most important of our medical gatherings is this convocation of the protectors of the faith—this annual meeting of the custodians of medicine's most valuable agencies, for reaching its devotees in the most remote places in this fair land.

To me, this is the most important session of medical men I have met with during my administration, for medicine must meet important problems arising both within and without the profession, and they cannot be solved without your consideration and determination.

In September there was a meeting at headquarters to prepare for your conference subject matter relating to certain practices which are becoming more prevalent as the economic pressure has become more acute. Contract practice which has been tolerated in some places, stimulated reactions which threatened the harmony and dignity of our practitioners. Contracts made by hospitals insuring the people have grown from offering hospital care alone, to a combination of hospital and medical service which will undoubtedly involve the medical profession in harmful and undignified practices.

These problems which affect the pro-

fession necessarily involve the county medical societies and through them, the state society, finally reaching our Judicial Council.

A recent decision of the Judicial Council voiced its disapproval of a contract which existed within my own city, opening the way for county medical societies to stamp out the evils of contract practice. This opinion when rendered, contained among other things, this expression: "A fundamental of medical ethics is that anything which in effect, is opposed to the ultimate good of the people at large is against sound public policy, and therefore unethical."

This far-reaching decision is one which can be used by any county medical society composed of a majority of members who believe in this fundamental expression. If wisely utilized, the majority will be able to clarify and purify any local situation.

I think that this pronouncement of the Judicial Council if properly used along with a workable plan within the county society, inclusive in character, to meet the ever pressing demand for medical care at a cost commensurate with the ability of the underprivileged to pay, will place the medical profession in a more constructive attitude.

There have been experiments proposed in many places with the general idea of having the people budget their medical needs, but it remains for some county units to propound definitely a policy acceptable and workable to solve the problem of the cost of medical care as it relates to the underprivileged. With such a plan, there ought to be many county societies with a membership sufficiently unified to put it into practice.

The Milwaukee County Medical Society has a most attractive plan to meet a local situation made complex by a socialistic government which has previously adopted certain so-called social reforms where an employed individual with a family may receive free medical care even though he has a salary of sixty dollars per month. To meet such a situation as this would apparently tax the ingenuity of the members of a county society. If the local committee's recom-

*Read before the Annual Conference of Secretaries of Constituent State Medical Associations and Editors of Journals, Chicago, Ill., November 18-19, 1932.

mendations are adopted, I hope it will be the result of a collaboration between the Milwaukee County Medical Society and the Wisconsin state organization.

I am convinced that no plan is likely to work until the profession is unified in its desire to meet and solve its problems.

The final report of the Committee on the Costs of Medical Care is about ready for the public. It has been projected into public anticipation by a finished and efficient publicity agent. This report has cost five years of effort and many thousands of dollars and, although I understand it is not like the original baby, it still carries stigmata of a doctorate not medical in origin. There will be a minority report. The public will have to choose the wiser course as outlined by the two reports.

The public should be interested in avoiding the pitfalls of any system which discredits the awards of competitive medicine—those rewards which appeal to the highest type of young people and which magnify the values occurring in a selected personnel, which should compose the profession.

The medical profession sees ahead and is deeply interested in preventing any system from being adopted which threatens the steady advancement of scientific knowledge and progressive development in the art of healing. Unfortunately, medical men themselves are not aware of the fact that experience shows that in all countries in which medical practice has become subservient to extraneous control progressive scientific medicine and the best medical care are utterly incompatible under any such system, whether it be governmental or not.

I agree with Dr. Sargent, and he will recognize some of these ideas: Organized medicine should and I believe will supply a workable plan, safeguarding the best traditions of the profession and the fundamental practices and responsibilities of individualism in the care of the sick. If wisely considerate, such a plan will continue to promote the highest type of medical service in this country. To be successful, a plan should take into consideration the frailties of human nature existing among the devotees of our pro-

fession. It should conserve their abilities and opportunities, rewarding them according to their energy, talents and personalities.

When the county society as a unit becomes the chief factor in organizing such a plan, then medicine will be able to surmount what can be considered the catastrophic cost to individuals and families who are unfortunately sick. When this is done, the sacred rights of personal confidence between patient and physician will be preserved, and at the same time, a method will be supplied for meeting the economic necessity of the cost of sickness, which might be entirely beyond the means of the afflicted ones.

I have the hope that out of experience and great desire on the part of the leaders of medicine and the co-workers there will come a solution more in harmony with America's thoughts and aspirations. There is a willingness to co-operate. It is time for action to preserve the best interests of the people through the protection of a great profession from disintegrating forces harmful to all.

It is recognized, however, that this period of depression through which we are now passing has developed new essential differences in the moral concept of competitive practices in medicine, and it has become the duty of our organization to restate some of the purposes and principles which should control the future relation of medical men to the people.

Dr. Follansbee, as chairman of the special committee, will no doubt ask Dr. Pusey to read to you a restatement of certain principles more nearly in line with what should be the professional attitude of today toward our general ethical standards.

The American Medical Association with its various departments is fulfilling the expectations of service to the profession in a very satisfactory manner, far beyond the hopes of the great men who contributed so much to its early development. Few members of our organization appreciate the magnitude of the routine work which goes on day by day at headquarters. The demands upon the working organization are increasing. Suggestions for further expansion have been

made by thoughtful men. For instance, many of our state and county societies, through imperfect organization, fail to develop leadership in constructive medical policies. We have undoubtedly come to the time when the leadership of our organization should be felt by every member.

There is no criticism of the present administration of our organization; the demands upon the existing forces are extreme, while the need for special study of economic and social problems appears urgent. There ought to be a close and continuous co-operation between the parent organization and all constituent units, both for the collection of data essential to a clear understanding of all medical problems and for the distribution of suggestions which may be helpful in solving local problems. I appreciate the fact, however, that any such activities must be welcomed by the state medical associations.

There is plenty of material in the home office to aid progressive movements in the interest of the people and the profession. This material could also be used as a deterrent toward legislation or propaganda not deemed in harmony with our ideals. The county societies would no doubt welcome such aid. Constructive policies discussed and endorsed by the county units would forestall much of the unwise legislation now confronting the profession. We would have a positive program ready instead of being placed in a negative attitude.

In our Bureau of Medical Economics as well as in our Bureau of Legal Medicine and Legislation excellent work is being done now, and the mass of information which has been accumulated will soon be crystallized into a most helpful group of general policies which when worked out, will advance the knowledge of the economic status of the medical profession throughout the country. I simply raise the question of whether our system of government is being used as advantageously as it might and whether we reach the smaller units through the state secretaries expeditiously and effectively.

In September, 1932, as members of the Committee on Legislative Activities of

the American Medical Association, we were invited by the Commander of the American Legion to come to the meeting at Portland, Oregon. Drs. Wright and Crockett joined me in Portland where we discussed with the members of the Rehabilitation Committee of the American Legion and with General Hines, Administrator of Veterans' Affairs, the question of hospitalization for the veterans of the World War. We were treated with the greatest consideration and found General Hines and Dr. Griffiths equally courteous. We developed the position of each of the forces, and made clear the attitude of the American profession. We left the one important thought—that there can be no peace as long as professional opposition is necessary to protest the present use of national hospitalization. We insisted that the government should stop building hospitals and permit individuals with disabilities of non-service origin who are able to pay for medical care to utilize local physicians and local hospitals.

As I see it, our professional welfare is definitely affected by the future attitude of the government. With us it involves the progress or decline of the art of medicine, and the remote likelihood of the State itself assuming all responsibility for the medical care of its people. If the government persists in this plan, individualism in medicine will be greatly hampered and a multitude of evils, which can be easily understood, will follow in its wake.

The American people are just now realizing that there is a limit to their capacity of paying taxes, and that we as a nation, down to the smallest municipality, are struggling with the most serious depression of modern history. Everyone is becoming aware of the danger to the State which has come in the wake of the tax burden which now exists. Leaders of both political parties, leaders of business, veterans of the World War, and citizens throughout the land recognize the impossibility of continuing a policy toward veterans not injured in the war which has added four hundred and fifty millions of dollars to the overburdened taxpayers, which sum is being

paid out by the government. There is no difference of opinion in having the government care for all veterans with service connected disabilities. We are all glad to see the government assume the privilege of caring for him, but we, the doctors, as a great body, approximately 40 per cent of us having served in some capacity in the war—and without physicians no country would dare to go to war—should demand the repeal of 202-10 amendment, which directly concerns us, and should join all other earnest citizens in a definite effort to bring the budget of the United States government back to a reasonable basis.

It has been emphasized again and again in many places that unless the liberalizing laws regarding veterans which are already passed are repealed, that more hospitals will have to be built and if more liberalizing laws are passed then still more hospitals will have to be built.

Many forces beside the medical profession—informed Americans—recognize this drain upon the government's resources. They would also welcome the help that the medical profession can give toward repealing this destructive legislation. A determined fight on our part will be the turning point. We can destroy the menace confronting our profession and the country, and we should bend every effort through co-operation with every patriotic American who wishes to see this country freed from overburdening taxation.

In summarizing, I would like to stimulate discussion by bringing into the open the questions which are the background of our distress.

1. Should we or should we not advocate as a basic principle the Iowa plan of dealing with indigency?

2. Should we or should we not develop a comprehensive inclusive county medical society plan of creating a budgeting system whereby the catastrophic needs of the people can be met at a cost within the reach of the families who are unfortunately sick?

3. Should we or should we not condemn all hospital insurance schemes for

the care of the sick? Or, is it possible to discriminate and say to hospitals that no plan will be recognized as worthy, which includes the physician's services but such hospitals are to be opened to all members of the county medical society, preserving free choice of medical service on the part of the patient.

4. Should we or should we not bring all the pressure we have to bear upon the December Congress to establish a different policy toward the hospitalization of nonservice disabled veterans?

5. Should we or should we not demand the repeal of the 202-10 amendment which has opened the government hospitals to all nonservice disabled veterans?

6. Should we or should we not strive both to limit the number of new medical graduates and to develop the field of immunization and preventive medicine for private practitioners?

7. Should we or should we not fight with all the strength of the body medical in its individual and collective entity, the trend to state medicine in all of its ramifications which threatens to destroy our professional integrity and material remuneration and to retard the progress of our science?

I raise these questions so that through the wisdom of this body we may be able to crystallize our position and concertedly get into action.

The medical profession treasures its ancient home of Hellenic origin; its straight lines are redolent of beauty; none of us complains of its architecture but, as time goes by, like all homes it needs repolishing. Its superstructure stands upon a foundation which time has scarcely marred. The builders of today, like the builders of yesterday, are trying to keep this foundation sound and secure. The portals of this home have always been flung ajar to extend gracious hospitality to all who need its beneficent bounty. We are proud to claim it our habitat, and we should protect its beauty, culture and integrity with our life blood.

MENTAL CANCER*

R. W. ROBB, M.D.

Osawatomie, Kansas

The study of functional mental diseases is one of ever present interest. They are regarded as functional because, so far, no one has been able to demonstrate definite anatomical changes which could be considered as causing them. The study is intriguing because, viewed from any angle, the physiological, the psychological, the economic or the social, the riddle of dementia precox still constitutes one of the greatest problems of medicine; a problem which few stop to consider or even know exists.

In the United States in 1931 the number of hospital beds was almost a million, 451,245 being set aside for patients with mental diseases, and the victims of dementia precox making up 80 per cent of the total number of mental patients. In Kansas we have, in round numbers, 4,500 patients with this disorder. It begins in early life and its victims live on or even exceed the ordinary life expectancy. The economic cost in Kansas is over \$5,000.00 per day. The social cost cannot be estimated. To the individual, it means a wrecked life and the failure to realize any of the things which life presupposes. To the parents, brothers, and sisters of the patient it means a grief which cannot be buried and forgotten.

If the patient has a family of his own, it means that he hangs as a heavy load upon them for many years with the practical certainty of passing the disease on to future generations. The problem is further complicated by the fact that many cases are not recognized in the early stages when treatment might give some promise of results. This body of cases outside the hospital constitutes a greater menace to society than those within, because uncontrolled. From its ranks are recruited the misfits, ne'er-do-wells, and many of the criminals. All these factors make dementia precox the outstanding medical problem of our time.

Let us approach the problem from the standpoint of the physician, and let us

use his language and not the technical varbiage of the psychiatrist.

There is a striking similarity between the changes manifested in functional mental diseases and some of the changes noted in somatic disease. For example, neoplasms may be either benign or malignant, composed of adult or embryonic cells. They may cause little inconvenience to the individual, be localized, circumscribed, and aside from the mere mechanical hinderance to the body cause little difficulty. On the other hand, the tumor may be a *cancer*, perhaps of a rapidly proliferating type, not only invading and destroying neighboring organs, but metastasizing to distant parts of the body and rapidly taking the person's life.

There are two general types of functional psychosis: First: The manic depressive psychosis, an acute benign disorder, sudden in onset, and with a good prospect for recovery. Second: dementia precox, a chronic, malignant, deteriorating mental disorder, insidious in onset and showing little tendency to cure. This is the "*cancer of the mind.*"

There is a marked similarity in the development of somatic cancer and this disease which we conceive as the "*cancer of the mind.*" Just as carcinoma develops insidiously and progressively until it finally destroys the *Person*, so dementia precox develops until it finally destroys the *Personality*.

The study of cancer presupposes a precancerous state, so, in the study of dementia precox, we stress the prepsychotic personality. The first requisite for its growth is a suitable soil. It selects the seclusive, "Shut-in" personality. Its victims are recruited from every strata of society, particularly from the type of individual who is inclined to be a social, sensitive, desirous of being alone, or unable to make friends easily.

Just as carcinoma selects for its field a scar, some point of irritation, or some glandular tissue that is rapidly changing, so dementia precox selects a personality that has been scarred, irritated, frustrated, or that is developing unevenly. In this soil it implants those traits and tendencies which, taking on malignancy, fi-

*Read at the meeting of the Franklin County Medical Society at Osawatomie, Kansas, June 29, 1932.

nally destroys the personality. Cancer contains the embryonic type of cell which fails to conform to the normal laws of growth and reproduction. Dementia precox is the implantation and perpetuation of infantile traits which fail to obey the normal laws of mental development. The malignancy consists in the over-development of the ego at the expense of other traits of the personality, and its subsequent retrogression.

Keeping in mind this concept of dementia precox as a malignant process, let us consider some of the symptoms it presents. There are four types of dementia precox and there are certain basic fundamental symptoms which are common to all. These are egotism, seclusiveness, suspicion, inability to recognize deficiencies and to adapt self to environment or to the requirements of new situations. These personality traits are the common denominators for the summing up of these human fractions.

Whenever there is an unusual demand for adjustment, such as puberty, marriage, childbearing, the strain of competition in school or business such people are unable to meet the same in a normal way.

Given the pre-psychotic personality, and the development of these basic symptoms we can distinguish four types of diseases.

First: The *simple type*, in which simple deterioration is the dominant symptom. It is characterized by, what might be termed, a hypoplasia of ideas. There is both a paucity and a poverty of ideas. The emotions are dulled or bottled up. They give no adequate expression to joy, sorrow, hope, or disappointment. They lose interest in everything except themselves, and this interest they do not express. They are "Robinson Crusoes" each on his little island completely surrounded by some element which cuts him off from the world of reality. They live in a land of dreams rather than of fact. In their make-believe world their egotism reigns supreme. "It is monarch of all it surveys, its right there is none to dispute." The precox is one cut off from every other person, and from the world of reality, absolutely alone.

The greatest change is in the realm of emotions. Instead of these being fluid, a medium for the expression of feelings, a means for the portrayal of the hopes, aspirations, ambitions, and loves of the individual, we find them immobile, solidified, frozen.

This condition of alienation or living in a manner foreign to the rest of mankind leads to the development of a group of secondary symptoms; just as cancer may be followed by anaemia or emaciation.

In the *catatonic* type these basic symptoms are intensified, and are accompanied by: (1) *negativism*, the refusal to recognize the desire of others; (2) *mutism*, the refusal to communicate with others; (3) *resistiveness*, the refusal to co-operate with others; (4) *combative-ness*, acts of opposition to the desires of others; (5) *impulsiveness*, acting without volition or judgment; (6) *hypersuggestibility*, the condition of becoming mere automatons. All these are secondary symptoms, the result of exaggerated egotism, and the desire to cut off every connection with reality. There may also be seen reactions to hallucinations and delusions, disorders of sense and judgment.

The *hebephrenic* type withdraws himself farther from reality than does the catatonic. He goes to a new world and immediately takes out naturalization papers and becomes a permanent citizen. His language is incoherent, he coins new words, uses expressions which are unintelligible, exhibits peculiar mannerisms, reacts to bizarre delusions, and hallucinations. His conduct is foolish, and marked by grimacing and silly laughter. The catatonic is close enough to reality that he has to resist its attractions, his adventures are on the frontiers of this jungle, into which he may make excursions or sometimes extended expeditions, but he often returns to the outposts of his old life. The hebephrenic goes so far into this jungle that he never finds his way out. He has cut all the lines connecting himself with our world, and henceforth sees, hears, and knows nothing but his own jungle life. He makes no effort to return and deteriorates rapidly.

The fourth type is the *paranoid*. He has all the primary basic symptoms, but his secondary symptoms are systematized and fixed. Like the catatonic, he is in the jungle but he is trying to get back; and his systematized delusions and hallucinations are his explanations for his position and his plan for getting back to right relations with the world. His plan is always doomed to failure, but it seems that his efforts to save himself wards off deterioration, so that along many lines he is as capable as he ever was. His fixed, systematized delusions become his constitution and bylaws. They are directed either to the exaltation of his ego, or to free it from some malign influence such as the devil, the Ku Klux Klan, the bootlegger ring, the One Suspender Brotherhood, or from abstractions, such as "sickness, disease, or death." His conduct is logical when his premises are accepted; and, except for his delusions and hallucinations, may appear normal.

All of these four types of afflicted personality lack insight. They know nothing of the disintegrating influence which is destroying their mental life.

SUMMARY

Dementia precox is the outstanding medical problem of today. It is a chronic, malignant, deteriorating, mental disorder insidious in onset and showing little tendency to cure.

Just as cancer destroys the Person, so dementia precox destroys the Personality.

For its development it is essential to have: (1) a suitable soil, the prepsychotic personality, in which is sown the seeds of the psychosis; (2) given this prepsychotic personality, a disease, accident, disappointment, the strain of living, or anything requiring adjustive compromises with environment gives favorable outward conditions for the development of dementia precox.

The disease is marked by a characteristic alteration in thinking, feeling, and in ones relationship with the outer world. The patient withdraws from reality into a world of his own making. Withdrawal results in: (1) *simple* deterioration of all

mental faculties, especially in the emotional sphere, or (2) The development of secondary symptoms, such as negativism, mutism, blocking of thought, stupor or excitement, and errors in perception and judgment, indicative of the *catatonic* type; (3) bizarre delusions and hallucinations, grimacing, silly laughter, confusion of thought, and incoherent speech, as seen in the *hebephrenic*; or (4) the development of fixed, systematized, or persecutory delusions which are the patient's effort to explain and to accommodate himself to his disorder.

—R—

TRAINING PERIOD FOR MEDICAL RESERVE OFFICERS

From February 12 to 25, 1933, there will be a training period for Medical Department Reserve Officers of the Army and Navy, made possible at the University of Washington Medical School, St. Louis, Missouri, by the courtesy and enthusiasm of the faculty of this school in co-operation with the Medical Departments of the Army and Navy.

While this is classed as an "inactive duty period" and is without pay or allowances to the participants, the time spent is recognized for the same credits as though it were an active duty" period. The exceptional clinical advantages of this great medical center, combined with the advanced military and naval training, make possible a very profitable two weeks. The training is open to all Medical Department officers of the Army and Navy reserves, or the National Guard.

The program of the clinics will be under the direct supervision of the faculty of the Washington University. The military instruction, which for the first time includes instruction with reference to the medical service of the Navy, will be under the direct supervision of Col. George A. Skinner, Medical Corps, United States Army, Corps Area Surgeon, assisted by Lieutenant Commander Reuben H. Hunt, Medical Corps, United States Navy.

Applications for attendance should be forwarded to the Surgeon, Seventh Corps Area, Omaha, Nebraska.

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Serious Complications of Early Pregnancy With Case Report

RALPH RUST WILSON, M.D.

Although there is a variety of complications in the first trimester of pregnancy, except for the accidents incurred by ectopic gestation, few at this early stage are serious.

This is a native American housewife 24 years old who entered the hospital March 25th, this year for vomiting of pregnancy.

Her past history is strikingly negative, even to close questioning after her recovery. Five years ago she gave birth to a normal child who is still living and well. Delivery was effected by low forceps under ether anesthesia. In no way was there any unusual complications to this pregnancy, either prenatally or postnatally except her physician, on check-up examination, told her she had a deep cervical laceration.

Passing to her present illness, nothing abnormal has occurred until about two months ago she noted considerable nausea. Then when her next period was missed she suspected pregnancy as being the cause. This progressed to distressing vomiting and writhing, oftentimes following which she noted vaginal staining and rarely small clots. The two weeks prior to her hospital entry she had kept down scarcely nothing.

FIRST ENTRY

On entrance her examination presented the usual findings of a seriously dehydrated and starved case of hyperemesis. The size of her uterus, however, was larger than her estimated date of gestation. No special significance was attached to this fact at the time. And the above mentioned cervical laceration was found which was interpreted as being the cause of vaginal bleeding from the writhing of vomiting.

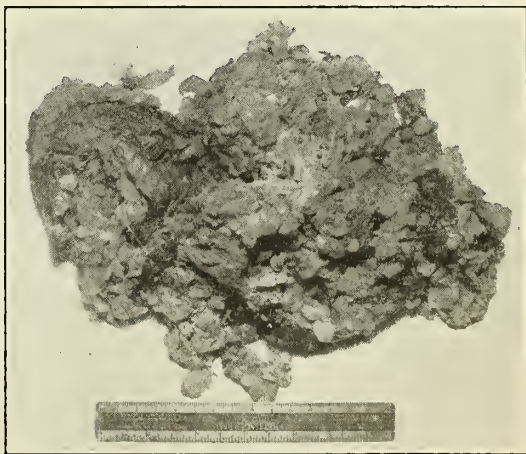
The Ascheim-Zondek test substantiated the diagnosis of pregnancy. Other laboratory findings were essentially unimportant except there was considerable ace-

tone in the urine but not surprising in view of her vomiting.

With these facts she was considered a case of hyperemesis gravidarum and treated accordingly, viz.: hi-caloric diet with frequent feeding, sedatives generously, and subcutaneous and intravenous fluids including frequent administering of 50 per cent glucose. After three weeks she had recovered her strength, had overcome her vomiting and was allowed to go home. Three urinalyses during this time were negative except for acetone on admission. Vaginal examination at dismissal again revealed uterus larger than estimated gestation with a noticeable boggy flabbiness in consistency.

SECOND ENTRY

Ten days after leaving the hospital she was brought back for cramps and bleeding. This was attributed to over activity as she was feeling so well. She was bleeding quite profusely and showed signs of recent blood loss. *x*-Ray examination failed to show fetal parts, although the uterus extended to the umbilicus. The Ascheim-Zondek was again positive. Under ether anesthesia the uterus was explored and packed with gauze and in so doing typical grapelike hydatid moles were dislodged. That furnished the true explanation for the enlarged boggy uterus and vaginal bleeding. She was given intravenous fluids with glucose and shortly thereafter a blood transfusion. In view of subsequent developments it is queer to state she reacted quite favorably to both the general anesthetic and the intravenous glucose.



Twenty-four hours later the pack and about a pint of mole tissue was removed.

As to hydatid mole: since the advent of the Ascheim-Zondek test, it is no longer good surgery to do ruthless hysterectomy on all these young women for fear of decidum malignum. The conservative method was therefore elected in this case.

After further transfusion and preparation the patient was thoroughly curetted ten days (May 9, 1932) after the definite diagnosis was made. Only local anesthesia was used for the procedure. This was followed by a third transfusion; and again, the convalescence was quite satisfactory. She was dismissed with specific instructions to report monthly, which she has done.

THIRD ENTRY

Then, August 2, 1932, three months after the first curettage, it was decided for the sake of absolute safety to repeat

hydatid mole. But, something else had happened to her in the meantime.

On the first morning after the anesthetic a very observing nurse, when attempting to awaken the patient for her morning care found her in a stupor and called the interne at once saying she thought the patient was in diabetic coma. He readily verified the diagnosis and insulin was started promptly.

Her initial blood sugar was 400 mg./100 c.c. Her urine showed 16 per cent sugar. Her preoperative blood sugar had been 91 mg./100 c.c. No glucose had been administered at this hospital entry. She had entered the hospital only because she had been requested to do so. She had been very active. She had been on no special diet as her condition had not indicated such for the past three months.

The following table is a summary of her lifetime carbohydrate balance:

Indication	Anesthetic	Glucose	Urine	Reaction
Parturition	Ether	0	0	Favorable
Normal life	0	General diet	0	Favorable
Vomiting of pregnancy	0	Frequently 50%	Neg. 3 exams.	Favorable
Pre-natal building	0	Hi-caloric diet	0	Favorable
Uterine exploration	Ether	Yes	Neg. 1 exam.	Favorable
Curettage	Novocaine local	50%	0	Favorable
Curettage repair	Ether	Yes No	Neg. 1 exam. 91 mg./100 c.c.	Coma 400 mg./100c.c.

the curettage in spite of the negative Ascheim-Zondek. All other preoperative laboratory tests including blood sugar were within normal limits. Because the cervix and uterus had involuted well and were firm and contracted and because a repair was to be done, too, it was decided to use ether anesthesia. Very little material was obtained even with a sharp curette and the pathological report was "chronic interstitial endometritis." The patient had apparently been cured of her

She now is under the care of an internist who states she requires 25 units of insulin daily while on a very restricted diet. The Ascheim-Zondek test was again negative on October 1.

The development of hyperemesis gravidarum, hydatid mole and finally diabetic mellitus in rapid sequence makes it difficult to explain these conditions from the standpoint of a single etiological factor.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

Emotion that remains bottled up exerts a harmful physiological influence, especially so on the tuberculous person. Unfortunately, he cannot work off his emotions or shift his interest to another scene. The disease itself inevitably brings about emotional strains involving business relationships, breaks in family ties, and financial worries. In his segregation and enforced leisure the patient broods—and his problems become emphasized and distorted. To adjust the patient's state of mind is an essential therapeutic requirement in the "cure." Mary B. Eyre has studied the role of emotion in tuberculosis from the psychological approach. Her findings, presented at the latest annual meeting of the National Tuberculosis Association, are here briefly summarized.

The Role of Emotion in Tuberculosis

The human organism responds as a whole to its internal and external environment. We need not separate mind and body (much less soul and body), but regard the human individual as trying to get along with the use of all of his functions, endowment, and experience.

His functions include not only his feelings, but the use of his brain. Stirred-up feeling is known as emotion, and implicit in emotion is *energy*, which is always dynamic. The individual who experiences emotion is therefore *ready to act*. Researches have demonstrated that the sympathetic division of the autonomic nervous system, through the adrenal glands (and possibly other tissues), prepares the body for activity at the same time that the individual is under emotional stress. If the discharge of this energy should not take place, then the preparatory processes become disturbers and disrupters of the organism.

Each one of us needs at least to feel safe. Anything which menaces our bodily, mental, or financial security, sets up at once a state of tension, which disintegrates our assembled forces in fronting

our world. In the weak and timid person, he who has never learned self-reliance or known what it means to think well of himself by reason of success due to his own efforts, *the sense of his inadequacy* is always his first response. To tell him "not to worry" and to "control his emotions," far from helping, usually increases his tension without showing him how to release it. Something detrimental does happen to all responses of the individual, through worry; something beneficial takes place as inevitably through the building up of the sense of security. Metabolic rate of plus 124, with pulse rate of 112, was changed to basal rate of minus 3, pulse 72, within twenty-four hours, in an individual whose anxiety over her financial safety was relieved meanwhile.

Of all the emotions, fear seems to be the predominating one. The characteristic optimism which is generally attributed to tuberculosis was found in a number of observed tuberculous patients to be compensatory to an underlying fear and dread of non-recovery, which they resolutely refused to admit to themselves or to acknowledge to others. Is the hopeful state observed in many tuberculous patients due to a specific toxin of the tubercle bacillus? It is more simply explainable by the defense mechanism aroused by fear, super-imposed upon the general biological stimulation which is the body's reaction against the bacillus.

MEASURING EMOTIONAL STATES

Even though measures of precision have not yet been evolved for emotional states, it is a step in the right direction to assemble the evidence, and to compare symptoms involving strong feeling, with objective physical findings. Such correspondence can be observed in the physical field, in rise or fall of temperature, in metabolic index, and in functions governed not only by the vegetative nervous system, such as digestion and elimination, but by the sympathetic division of the autonomic as well, including, as Cannon has shown, heart acceleration, respiratory change, pilo-motor reflex, endocrine activity, increased blood sugar and hormone liberation. To these may be added as possible signs, the healing or

increase of cavitation, and other reparative or destructive processes of the body, as revealed by *x-ray* and chemical analysis.

It would seem reasonable to ask of any measures which set out to regulate emotion, that they should prove their validity by producing an effect upon the general bodily well-being of the patient.

Eighty-seven tuberculosis patients were studied. Although a complete comparison with physical symptoms was not made, it would be possible to check the records of emotional behavior with the accurately kept physical histories. The net results of this study, based on the answers to four inclusive questions, were in terms of social adjustment.

Fear was found to be the chief factor in emotional instability, present, to some detectable extent, in all but two instances. One of these was a patient who had been told that as "a light case" she would be ready to go home, as soon as she recovered from an appendectomy which had brought her to the acute unit. Her attitude was quietly relaxed, without tension of any sort, either of marked cheerfulness, stoicism, or depression. It was almost startling to find a patient who felt no need of any form of defense against fear.

No adequate explanation can be offered for changes in temperature which accompany emotional excitement, or its release, other than the relationship between the autonomic nervous system and endocrinal activity. Cannon points out that homeostasis of body temperature is regulated in part by the sympathetic, which also influences the output of adrenal and thyroid and pituitary glands, the governors of muscular tonus, and, indirectly, oxygen intake. Muscular action results in heat production, which warms the blood; shivering, pilo-motor reflex, and sweating, are all heat regulating devices directed by the sympathetic, which also responds to emotional excitement, of either sudden or long continued duration. Thus the whole mechanism is in such delicate adjustment, that change in any factor could presumably cause imbalance.

RE-EDUCATING THE EMOTIONS

Outlets must satisfy the inmost aspira-

tions of the individual, and carry on his energy in channels appropriate to his needs. It is not enough merely to tell him to "work off" his excess emotion. It must be used creatively after his heart's desire, in some fashion.

Dr. Cannon points the way physiologically, by showing the disrupting effects upon an organism prepared by emotion for violent action, if the physical action be deferred or prevented. He stops at that point. The principle can be carried further, to provide adequate means by which the excited organism *can* find use for the energy which it is prepared to expend, through interests fitted to its intellectual level.

To warn a patient against giving way to his feelings, without showing him how to bring about this control, is but to increase his strain; just as to beg him when in great bodily fear, "not to be afraid," usually augments his terror.

Re-education of the patient, in the sense of helping him to understand the sources of his emotional stresses in order that he may know how to re-route their component energy, is the most practical therapeutic aid for the emotional problems of tuberculosis. The individual must first be helped to face his difficulties, and to identify the feeling-habits in himself (usually dating back over long periods) which led to his failure; he must be shown how to substitute new feeling-habits, which will lead to better adjustment; how to rely upon himself, and become emotionally grown up; and finally, how to find adequate constructive outlets for his emotional energy. In bed patients, these outlets must necessarily be through mental instead of physical channels.

Optimism that is based on confidence in the recuperative powers that are within the organism, is a different thing from the defense against fear, and is a tremendous asset which therapeutics cannot afford to overlook. If fear be faced, and not run away from by pretending it does not exist, it can be dealt with adequately.

The Role of Emotion in Tuberculosis, Mary B. Eyre, Trans. of the Nat. Tuberc. Assn., 1932.

LETTERS FROM A KANSAS DOCTOR'S SON TO HIS DAD

Dear Dad:

Naturally, I am disappointed that the lame ducks turned out to be of the dry variety. However, it is foolish to expect the present Congress to waive their rights to probe each other's campaign funds, for the uninteresting alternative of providing beer. Perhaps the resulting euphoria would merely have provided a roaring hangover for the depression. I know you are not disappointed, not to mention the State of Kansas.

Your inquiry as to the state of my health is startling. At first, I thought you were ill. Now, I have decided that as your arteries harden your heart softens. You should know I am well. Of course, recently I did have another little round with my belly. Really nothing to speak of: merely discomfort, pain, tenderness, rigidity, fever and nausea. You know the sort of bizarre symptoms so often erroneously considered by the common practitioner as indicative of peritonitis, but which are dismissed by the more sophisticated psychiatrist as "neurosis gastrica dysfunctionata," or when occurring in the psychiatrist's own family, the diagnosis is less courteously expressed.

At any rate, I thought I should consult my professor of medicine to be on the safe side. After organizing my story which was well reenforced by symptoms I made my debut as a patient. I was well received by the eminent gentleman who supplemented his rather cursory examination by giving me a complete oral examination on the manifestations of lepra anesthetica. After a few punchings here and there, emphasized by the appropriate facial contortions he was able to tell me that I was blonde, blue-eyed and obviously of a nervous temperament, adding that undoubtedly I was afflicted with "areophagia." Even an areophagic would have been dysphagic at such a diagnosis. Nevertheless, you can imagine how much better I felt to know the perforated ulcer which was factual to me was fantasy to the prof. Needless to say I am no better. The next time I wish a

scholarly dissertation on the etiology of gangosa or some other fool thing, I'll call on the erudite gentleman. If I'm sick—I'll hunt up an orderly.

My roommate has had a similar experience. Last week he consulted me with a peculiar eruption on his neck which I diagnosed as dermatophytosis contagiosa, or just plain "academic itch." I prescribed sulphur. Not being satisfied with my findings, he took it upon himself to consult the professor of dermatology. The professor without missing a step as he strode down the hall, made an examination in five seconds and summed up the case thusly: "Collar chafing, try cold cream. Good day."

I am sure you have been impressed by the shagginess of the barber's son. Likewise, it is considered preposterous to the baker that his children should like doughnuts. And many doctors shake their sagacious heads in wonderment when a colleague dies of carcinoma of the colon.

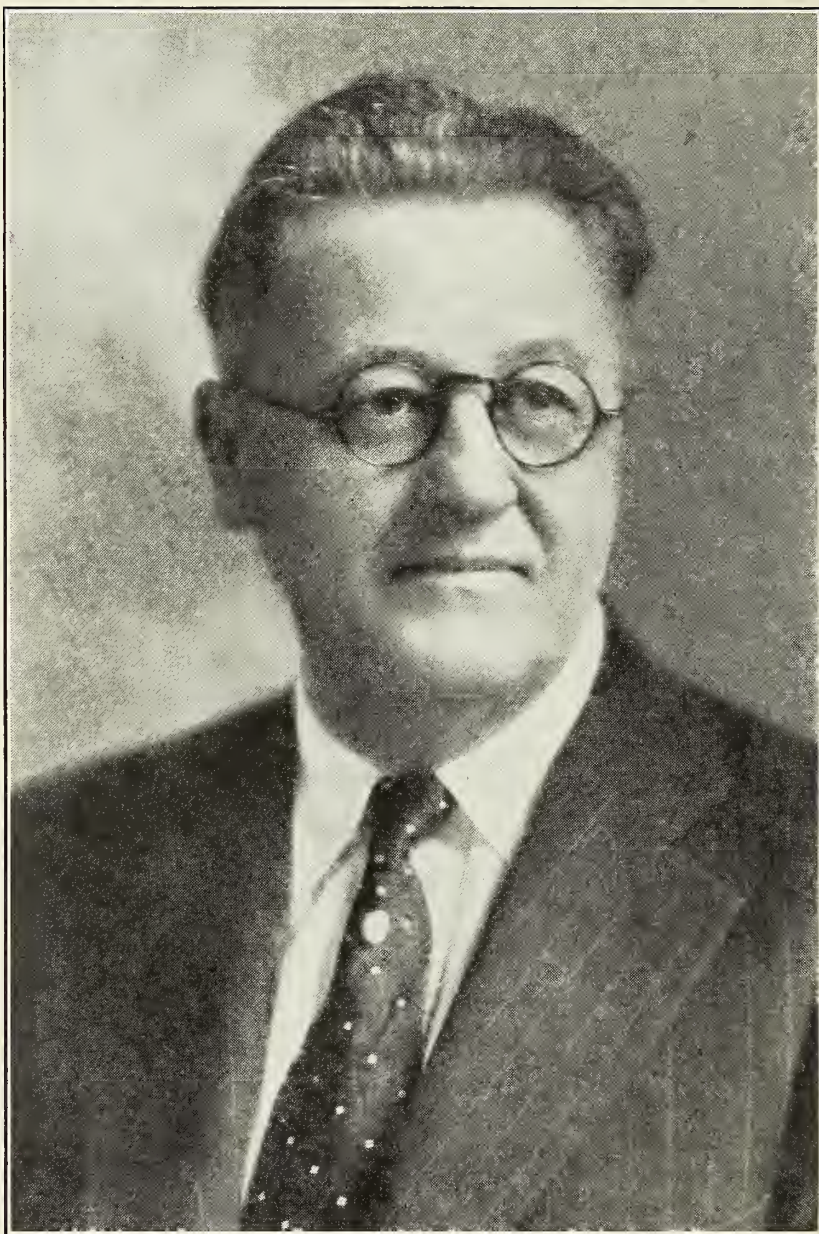
Love,

YOUR SON.

P. S. Please ask the bank to send me another check book.

—R—

Convalescent Serum in the Treatment of Poliomyelitis.—The status of the treatment of preparalytic cases of acute poliomyelitis seems to require clarification. Although prevailing clinical opinions as to the efficiency of the treatment have been optimistic, few investigations have been adequately controlled. In two recent reports of controlled therapeutic tests, the evidence provided is not encouraging. Kramer, Aycock, Solomon and Thenebe record eighty-two cases about equally divided between those who received convalescent serum and those who did not. The Boston investigators concluded that their study offered no statistical evidence that convalescent serum is effective. Together with members of the poliomyelitis committee of the New York Academy of Medicine and his associates in the municipal hospitals, Park studied a total of 927 preparalytic cases of poliomyelitis, 519 of which were treated with convalescent serum; 408 patients were not given serum. The results of this study likewise do not afford statistical proof that the use of serum has any value in cases in which the cells of the central nervous system are already involved. The fact that the two controlled therapeutic tests gave similar results suggests that heretofore too much confidence has been placed in the treatment with convalescent serum. The need now is for additional evidence based on controlled studies which take into account the variants that make the problem complex. (Jour. A.M.A., October 8, 1932, p. 1266).



PAUL STAFFORD MITCHELL, M.D.
1875—1932

THE JOURNAL

of the

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EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

PAUL STAFFORD MITCHELL, M.D.

Paul Stafford Mitchell was born in Cherry Grove, Virginia, on November 11, 1875, and died at his home in Iola, December 29, 1932.

Dr. Mitchell received his education at the Central Normal School, Danville, Indiana; the University of Chicago; Northwestern University; Hering Medical College; the University of Illinois and the New York Post Graduate School. He graduated from Hering Medical College with the class of 1899; located in Iola in 1902 and had practiced his profession in that city to the time of his final illness.

On December 25, 1902, he was united in marriage with Miss Mary Grace Jaques at Hammond, Illinois. Mrs. Mitchell died in Iola on March 26, 1931.

Dr. Mitchell because of his intense interest in organized medicine has been one of its most dependable workers. He served as Councilor of his district for many years. At the 1931 meeting of the Kansas Medical Society in Manhattan, he was named as president-elect; assumed the duties of his office on January 1, 1932, but lacked three days of serving his elective term.

He was more than a physician; he was a friend and counselor. He was a loyal friend, for his friends meant much to him. He lived a useful life and will long be remembered by those who knew him.

Services were held at the First Baptist Temple in Iola on December 31. The body was taken to Mattoon, Illinois, for burial.

MORE ABOUT THE FULL-TIME SECRETARY

The most recent information available in the Journal office is that seventeen state medical societies employ full-time secretaries. Sixteen of these states were listed in a previous discussion on the subject*. Virginia, the seventeenth state employs a lay secretary.

The average yearly salary received by fifteen of the seventeen secretaries is \$5,450.

California was the first society to employ a full-time secretary, nearly thirty years ago; the most recent, Maine, approximately three and one-half years ago.

The 1932 dues for the 17 societies averaged \$10.50. Prior to employment of a full-time secretary, the average annual dues of eleven of the societies was \$6.35. The average membership of the seventeen societies was 2,562. Colorado, Maine, Ore-

*Jour. K.M.S., August, 1932.

gon and West Virginia, each have a lesser number of members than Kansas. Dues for the year 1932 for the four societies were: Colorado, \$10.00; Maine, \$8.00; Oregon, \$20.00, and West Virginia, \$10.00.

As stated in the previous discussion, the proposed plan of employing a full-time secretary was not in any way a reflection on the ability or the work of the officers of the society. Any organization which employs a full-time official has the entire time of that official devoted to the interests of that particular organization.

There are sufficient reasons why a full-time executive secretary should be employed. However, if such system is adopted by the society, it will undoubtedly result in an increase in the annual dues. Due to the economic depression, an increase in dues is not justified; the result probably would be a decrease in membership in proportion to the increase in dues. It has been suggested the Journal could be made a source of revenue for this purpose. More advertising could be secured for the Journal; however, with the publications of other state societies, the Kansas Medical Journal has made a policy of accepting only Council approved advertising. It is not believed the members wish to throw the columns open to indiscriminate advertising.

The committee appointed at the annual meeting to make recommendations after a thorough investigation of the question includes: J. F. Gsell, Wichita; C. C. Nesselrode, Kansas City; Walter Stephenson, Norton; A. R. Chambers, Iola, and Milton B. Miller, Topeka.

The committee report will be made at the mid-winter meeting of the Council in Kansas City, January 17.

“LIFE BEGINS”

“Life Begins” is a talking picture.

“Life Begins” to the accompaniment of a group of crying babies. A flash of a magnificently constructed building; a close-up of a plaque on the entrance gate designates it as a “Lying-in Hospital.”

Much of the action occurs in a ward where “difficult cases” are cared for. An elderly appearing lady (in bed) takes the part, more or less, of a master of ceremonies and curiosity develops as to why she is there; near the end of the picture she expresses certain hopes for her baby, when it is born. A woman, apparently a mental patient (curiosity again—why a mental patient in a lying-in hospital) enters the ward and inquires for her “baby.” She is discovered by a nurse and removed; soon returns and appropriates one of the babies resulting in much confusion. Another patient jumps out of bed, empties the contents of a flask into a hot water bottle which is then hidden under the bed covering. She is seen drinking from the hot water bottle; apparently becomes drunk and in a short time gives birth to twins.

There is much action in the picture. To get rid of one father-to-be who is always asking questions, the head nurse sends him to the drug store for a can of ether. He visits several drug stores but is unable to secure the ether because he does not have a “prescription.” When he returns to the hospital, he falls in a faint when informed of the birth of his child. A company of internes parade across the hall to the elevator, discussing loudly one of the “difficult cases.”

The story is centered around a young woman and her husband, she having been sentenced to a term in prison for killing some man. When brought to the hospital, the patient is handcuffed to the matron of the jail. It is to be a “diffi-

cult case." The physicians discuss the case; they request the advice of the young husband, then disregard it. The baby lives—"Life Begins."

Newspaper publicity and advertising raise the question as to whether the picture should or should not be shown to the public. Naturally, the public is curious and the only way to decide is to view the picture. Many women and young girls were in the audience. If arrangements could be made to have a member of the medical society present and give an informal discussion on pre-natal and maternal care, some good would undoubtedly result. Child-bearing in real life is serious.

"Life Begins" is a talking picture.

CONTRACT PRACTICE

At the Annual Conference of Secretaries of Constituent State Medical Associations held in Chicago, November 18-19, E. H. Cary, President of the American Medical Association decried the present tendency toward the contract practice of medicine. Dr. Cary was emphatic in his statement that the best medical care has never been achieved under any such system, governmental or otherwise. The address in full will be found on pages 14-17 of this issue of the Journal and demands the serious consideration of every member of the profession. In summarizing, it will be noted seven questions were presented which the speaker stated "are the background of our distress."

The "Iowa plan of dealing with indigency" is a practice followed by medical societies in Iowa in making a contract with the governing body of the county to render medical service to the indigent for a stated amount. More than 20 Iowa societies had a contract and rendered such service in 1931. Apparently, the plan has been satisfactory to all par-

ties concerned. Funds received may be used to pay dues, the expenses of guest speakers and general operating expenses of the society. If any funds remain at the end of the year, they may be prorated among the members of the society. At least two societies in this state have used such a plan in past years and two other counties at the present time are giving consideration to the plan.

A discussion of the budgeting system was presented in the columns of this Journal some months ago.* Prior to the time the address was published, one county medical society in this state was giving serious consideration to the adoption of such a system; report has not been received as to the final action. At a recent meeting of the Omaha-Douglas (Nebraska) County Medical Society, a proposed plan of creating a budgeting system for families with incomes of less than \$2,700 was rejected.

The majority report of the Committee on the Costs of Medical Care recommends: "the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods. This is not meant to preclude the continuation of medical service provided on an individual fee basis for those who prefer the present method. Cash benefits, i. e., compensation for wage-loss due to illness, if and when provided, should be separate and distinct from medical services." The minority report, however, contends: "The objections to compulsory health insurance are almost as compelling to this minority group as are those to voluntary insurance. Proof of the evils of the compulsory system is at hand in our own experience in this country with the only compulsory system with which we have yet had to deal, workmen's compensa-

*Public Health Organization and the Medical Profession, Jour. K.M.S., March, 1932.

tion insurance. Under workmen's compensation, groups are soliciting contracts, often through paid lay promoters; laymen are organizing clinics and hiring doctors to do the work; standards of practice are being lowered; able physicians outside the groups are being pushed to the wall; the patient is forced by his employer to go to a certain clinic, and the physician is largely under the control of the insurance companies. These are not visionary fears of what may happen but a true picture of widespread evils attending insurance practice. No better example should be needed of what must happen to medical care if compulsory insurance is extended to families."

The last pension for a widow of a soldier in the Revolutionary War was paid in 1910.* The Congress of 1917 realized the difficulties of the pension system and provided life insurance, a maximum of \$10,000, for each service man at a reasonable rate, payments to be deducted from the monthly service pay. Under the terms of the law, the insurance could be continued after the soldier had terminated his army service. In succeeding years legislation was enacted providing: disability compensation; vocational training; adjusted compensation; free hospitalization for all veterans regardless of the origin of the disability; retirement pay for emergency officers and in 1931, the allowance of a fifty per cent loan on the adjusted compensation certificate.

According to the report of the Veterans' Administration for the fiscal year ending June 30, 1931, of the total admissions to veterans' hospitals, 82,850 or 76 per cent were for the treatment of non-service connected disabilities as compared with 13,243, or 17 per cent in 1925, the year following passage of the law providing hospitalization for all veter-

ans. As of March 31, 1931, there were 53 veterans' hospitals in operation with a bed capacity of 25,930. The medical council of the Veterans' Bureau estimated the maximum number of beds required would approximate 130,000 on the basis that veterans of all wars would be given the privilege of free hospitalization. The development of such a plan would require the construction of some 103,000 beds, at an average cost of \$5,000 per bed. One of the plans advanced (and approved at the 1931 meeting of the American Medical Association) toward the reduction of governmental expense in connection with the hospitalization of ex-service men was that of H. H. Shoulders.† Briefly, the Shoulders' plan was: (1) a weekly cash benefit payable to the veteran during any period of total disability, and (2) the payment of a liberal hospital benefit sufficient to cover the hospital expenses during any period of hospitalization. The hospital benefit is in addition to the cash benefit.

The opinion has long prevailed that the number of new medical graduates each year, is in excess of the demand. There is also the opinion there is an excess of new graduates in law, dentistry and in other professions. Premedical requirements have been increased by many of the medical schools, but if anything, the number of prospective students making application for enrollment is increasing. No solution has yet been offered to meet this problem. The field of immunization and preventive medicine belong to the private practitioner. Yet, it is a well recognized fact in the absence of an epidemic or an organized program, immunization and vaccination are neglected, almost ignored, by the general public.

It is not believed that organized medi-

†Minnesota Medicine, September, 1932.

‡Jour. K.M.S., June, 1932.

cine favors state medicine. Organized medicine is vitally interested in a workable plan that will best safeguard the interests not only of the physician, but also the patient. The county medical society is the most important unit in organizing such a plan.

"The medical profession sees ahead and is deeply interested in preventing any system from being adopted which threatens the steady advancement of scientific knowledge and progressive development in the art of healing. Unfortunately, medical men themselves are not aware of the fact that experience shows that in all countries in which medical practice has become subservient to extraneous control progressive scientific medicine and the best medical care are utterly incompatible under any such system, whether it be governmental or not."

EDITORIAL COMMENT

The American Association for the Study of Goiter, for the fourth time, offers \$300 as a first award, and two honorable mentions for the three best essays based upon original research work on any phase of goiter presented at their annual meeting in Memphis, Tenn., May 15, 16 and 17, 1933.

Announcement has been made the American College of Physicians will hold its Seventeenth Annual Clinical Session at Montreal, with headquarters at the Windsor Hotel, February 6-10, 1933. Dr. Francis M. Pottenger of Monrovia, California, as President of the College, has charge of the program of general sessions.

Recent appointments by Governor Woodring: Board of Medical Registration and Examination, H. E. Haskins, Kingman, vice H. Z. Hissem; E. C. Duncan, Fredonia, vice P. S. Mitchell, and

John D. Pace, Parsons, vice G. R. Dean. State Board of Health, H. H. Brookhart, Columbus, vice H. L. Aldrich; Leo V. Turgeon, Wilson, vice Anna Perkins; Mr. Frazor T. Edmondson, Topeka, vice Donald H. Corson. Dr. Charles W. Robinson, was reappointed.

Gallstones are one of the most startling products that Los Angeles exports to Japan. Perfect beef gallstones are quoted on the open market at \$240 per pound, so it goes without saying that this is one of the most carefully handled cargoes. The gallstones are shipped in small wooden boxes, one pound to a box, and are carefully packed in cotton wool. They are highly insured against pilferage and theft in addition to the ordinary maritime insurance and they are usually sent by registered insured parcel post. Great care is taken to have the gallstones perfectly dry and free from mold as they are used by Japanese doctors in the preparation of certain medicines.—(Los Angeles Times, Sunday Magazine.)

Budgeted medical service was considered in Omaha but rejected by the Omaha-Douglas County Medical Society. The proposal was that the medical society, hospitals and nurses offer the services of all general practitioners, specialists, surgeons and others for any medical or surgical service whatever for a flat price of 3 per cent of the family income. According to the proposal, the "budgeted medical service" would be limited to families whose income was \$2,700 a year or less. The financial end was to be handled by the originator of the plan who believed 10,000 members could be secured in two years. Each month's receipts would be pooled and the total of all physicians', nurses', and hospital bills chargeable to the plan likewise would be pooled.

Interstate sale of a product composed of the ground, sterile branches of Field Horsetail (*Equisetum arvense*), labeled as a relief for diabetes and anemia, cost Charles F. Diller, trading as the Photo-Synthetic Tea Company, Lancaster, Pa., a fine of \$25. This "photo-synthetic tea," so-called, was labeled in part as follows: "Relieves diabetes and prevents anemia by making the sugar normal and the blood red." The government held that the labeling was false and fraudulent under the Federal food and drugs act, and the Federal court for the Eastern District of Pennsylvania upon a plea of *nolo contendere* by the defendant, assessed the fine. The herb, *Equisetum*, has been tried out for diabetes at hospitals and found to be worthless in the treatment of the disease.

According to the report for the year 1931, the Rockefeller Foundation, an organization devoted exclusively to philanthropic work, appropriated a total of \$18,737,967.90. This sum was distributed among the five fields in which the Foundation's interests lie: the humanities; public health; medical; social, and natural sciences. The increasing worldwide interest in social and economic problems was reflected in the appropriations voted for the social sciences. These totalled \$5,805,275—a larger sum than was appropriated in any other field of Foundation activity during the year. In the field of public health, the report announces the final working out and limited application of an immunizing vaccine for yellow fever, which now insures, for the first time, greater safety for those scientists who in field and laboratory, are engaged in the dangerous task of fighting that disease.

The National Institute of Health is the research center of the United States Pub-

lic Health Service. Coming into existence as a small clinical laboratory in New York in 1887, it was later transferred to Washington, and in 1901 Congress passed an act establishing it as a separate institution, under the Public Health Service and known as the Hygienic Laboratory. It was charged with the "investigation of infectious and contagious diseases and matters pertaining to the public health." The scope of the Hygienic Laboratory was greatly widened and its name changed to the National Institute of Health by the statute of May 26, 1930. This act gives to the Institute the property, equipment and scientific organization of the former Hygienic Laboratory and \$750,000 for the construction of additional buildings. This act of Congress also authorized the Secretary of the Treasurer to accept gifts for the general work of the Institute and for the establishment of fellowships in scientific research.

During the last two years Dr. Carroll Lafleur Birch, Chicago, has had an opportunity to study 35 persons with hemophilia, ranging in age from newly born to 52 years. Seven of the cases were sporadic, while 28 had a definite family history. The author has traced the histories of 20 families which consist of from four to seven generations. An analysis of these histories shows that persons with hemophilia have more daughters than sons, while transmitters have more sons than daughters. Over 71 per cent of the transmitters' sons had hemophilia. Only from 10 to 15 per cent of the transmitters' daughters had at least one normal son and no hemophiliac sons. Of the hemophiliac daughters, only from 3 to 7 per cent had at least one normal son and no hemophiliac sons. Nineteen patients have been receiving ovarian therapy for more than six months. Nine of these showed a good response, and nine

showed definite but less marked improvement, while the condition of one remained unchanged. The prolongation of the coagulation time in hemophilia is due to increase in the resistance of the blood platelets, for when this resistance is overcome, mechanically, the blood clots in normal time. (Jour. A.M.A., Nov. 5, 1932.)

—R—

A TRIBUTE TO DOCTOR MITCHELL

It has been my pleasure to enjoy a very close friendship with Dr. Mitchell for the past thirty years. We have taken many enjoyable trips together and spent many pleasant hours in his home as well as mine, and also in our duties pertaining to the attendance of our medical associations, not only state, but national.

Dr. Mitchell was elected as one of the censors of the Kansas Medical Society and served in that capacity for a period of about nineteen years. This office was resigned when he was elected president of the state society, which office he still held at the time of his death. The office of Councilor as well as president of the state society, was considered a great honor by the doctor and his duties were performed with cheerfulness and willingness. At all times when he was called upon to settle some amicable dispute among the local doctors in the counties for which he was Councilor, his duties were performed without any antagonism and leaving a friendship between both parties.

In his daily life he was always cheerful; always met one with some salutation that gave one the continued idea of his feeling for your well-being and his conception of life as one of not only business, but pleasure. This was one of the things that made the many friends which he possessed. I know many friends and I do not know of any enemies whom he has left behind. It was my extreme pleasure to be with the doctor in 1914 when the World War broke out and to

enjoy the great excitement which developed in the European countries. In fact we were in Vienna when the Crown Prince was slain and had gotten back as far as London when war was declared by England. It was always a source of sorrow that we could not get into the Scotch or English army at the opening of the war. Applications were made in London and Edinburgh to join the English army as surgeons, and Dr. Mitchell had since made many attempts to get into the service during the World War, but on account of being a great sufferer from flat foot his services could not be accepted. This, of course, was a great disappointment to him.

The deceased suffered many tortures during the last three months of his life, often complaining that the burning and irritation was almost beyond human endurance. During the course of his illness he suffered many injections of various kinds and four blood transfusions, but all to no avail.

Dr. Mitchell contributed a number of valuable papers which have been printed in the Kansas Medical Journal and all of them have been received and accepted by the society as valuable theses on the subjects presented.

I wish to express the sorrow of the membership of the Kansas Medical Society which will certainly miss his worthy council. Many aching hearts will remember the services received at the hands of our dear friend during his useful life while administering to the ill in this vicinity.

Paul Stafford Mitchell was born at Cherry Grove, Virginia, November 11, 1875. He attended country school and for two years was a student at Central Normal school at Danville, Indiana. He attended the University of Chicago for one year, Northwestern University for six months, and was graduated from Hering Medical College (homeopathic) in 1899. In 1900 he attended the medical department of the University of Illinois. He has medical degrees from both the last mentioned colleges, and during the years 1903-04 took post-graduate work in the New York Post Graduate School.

L. D. JOHNSON, M.D.

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

Tularemia

With several active cases of tularemia in Kansas at present, it might be wise to review the subject to remind the physician of the prevalence of the disease at this time of the year. As a whole, Kansas has had comparatively few cases, but this fall numerous cases have been reported from various parts of the state. A review of the reported cases over a period of four years shows that the condition is more prevalent in Southeastern Kansas than any other part of the state.

The disease is caused by the Bacterium tularensis, first described and isolated by McCoy and Chapin, in the Hygienic laboratories in Washington, D. C. The bacterium is a small ovoid bacillus measuring about .2 to .3 microns in diameter and about .5 microns in length. It is aerobic, facultatively anerobic and as grown on culture media, gives the impression of coccoid forms which are non-motile. In McCoy's first work on the matter, he felt sure that it was found only in rodents, rabbits and ground squirrels; that it was not transmitted from man to man. One case in Kansas points very definitely to the transmission from a mother to her son, who was dressing the wounds. In this history, the son had not cleaned nor handled rabbits. Another interesting history recites that the patient had absolutely handled no rabbits or squirrels and that the physician attributed the disease to cleaning quail. Another case reports the disease from cleaning a chicken. It is my opinion that if a thorough investigation were made, it would not place the carrier on the chicken and the quail.

The onset of the disease is very abrupt, as a rule within about 72 hours after the original infection, with severe pains and fever, marked prostration and profuse sweating. Of the cases reviewed, about 90 per cent show marked axillary glandular involvement, followed by suppuration. The usual convalescence covers a

period of about four weeks. Some of the cases in Kansas have continued over a period of three or four months. One case reported from Wichita gives the initial onset of the disease as 1918, while in the army. This man, a banker, has periodic recurrent attacks, medication doing no good and the condition running a course of a week or two.

Clinically, the diagnosis is made from the history of cleaning rabbits or squirrels; a skin abrasion on the hand, then the abrupt onset and axillary glandular involvement.

In the laboratory the diagnosis is made by agglutination of *B. tularensis* by the serum of the patient; the identical principle and theory of the Widal test in diagnosing typhoid fever. Blood culture will often give a positive result, the bacteria growing best on blood-cystine agar. Agglutinins may remain in the blood for many years, in an appreciable titratable amount. Francis found the average in 21 cases one year after infection was 1-140. In my own experience with 2 cases, agglutinins were present two years after infection in an average of 1-160. Francis, however, reports a second infection in a person two and one-half years following the original infection. From the literature, which is great upon reported cases yet scarce in scientific data, little information is obtained about immunity.

The only specific treatment reported is the use of goat serum, immunized with formaldehyde killed *B. tularensis*. No information is available that vaccines have been used. The usual treatment is symptomatic, directed toward the local lesion on the hand and the axillary suppuration. Some have recommended mercurial dressings, others have used permanganate solutions; none appear to offer more than a temporary aid.

The mortality rate is very low. In most cases, recovery is complete. A thorough history of the patient will give information that would suggest tularemia.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

OCULAR SYMPTOMS OF BRAIN TUMORS

This writer presents four cases of brain tumors which presented no localizing symptoms but were operated upon by decompression as a palliative measure and obtained an apparent cure. He discusses excellently the whole problem of frequency of papillitis in the presence of tumors, reasserting the well known opinion that papillitis may be absent even in an extensive brain tumor and that even when it is present and unilateral that the tumor may be on the opposite side from the papillitis.

(Ocular Symptoms of Brain Tumors, Bruner, W. E., Oklahoma State Medical Journal, Vol. 28:776-780, November, 1932.)

MENTAL HYGIENE

In the Virginia Medical Monthly for October the first part of the magazine is given over to a discussion of a program of mental hygiene for the state. Doctor Drewry of the State Department of Public Welfare writes the first article on "Why Is the State of Virginia Interested in Mental Hygiene?" He points out the tremendous increase in the number of mental patients, the cost of mental sickness, the great number of extra-institutional cases and gives a very constructive mental hygiene program for the state, all of which very adequately applies to our own situation in Kansas.

Dr. J. H. Bell writes the next paper on "The Status of the Feeble-minded and the Epileptic in Virginia" again pointing out the inadequate care in general which the state allows for them and their tremendous increase in number. He makes some pointed suggestions as to the organization and plan for the control or limitation of these defectives including identification and registration, institutionalization, rehabilitation, sterilization, parole or discharge, a follow up system, and last an appropriate legislation prohibiting intermarriage.

PITUITARY EXTRACT IN BALDNESS

This author follows the suggestion of

Bengtson in the Journal of the A.M.A. of November 7, 1931, in treating alopecia by means of anterior pituitary substance. He gives his results in eight cases in which he has routinely treated them by administering intramuscularly 2 c.c. of anterior pituitrin three times a week and having the patient take 5 grains of the anterior substance in compressed tablet form three times a day. In his conclusion he states that pituitary therapy is definitely indicated in early baldness and results may be expected within three or four months of continued treatment. These results may be classed as a stop in the loss of hair, a growth of new hair and improvement of texture. In baldness of long standing the procedure is impractical.

(A Preliminary Report on the Use of Anterior Pituitary Substance in Common Baldness, Kohn, Theo. Virginia Medical Monthly, Vol. 59:425-427, October, 1932.)

DENTISTRY IN MEDICINE

The November number of the current year of the New York State Journal of Medicine which is the official organ of the Medical Society of New York devotes the entire issue to papers by physicians and dentists on the interrelationship between dentistry and medicine, pointing out conditions of common interest between the dentist and the otolaryngologist, the dentist and the ophthalmologist, oral surgical problems of interest to rhinologists, dental caries and its relation to the toxemias of pregnancy, pediatrics and dental health, dental infections and their relation to systemic disease, and other similar papers. These papers are all the response of a joint meeting of organized medical and dental professions at the Hotel Pennsylvania in New York in November, 1931.

CRANIOCEREBRAL INJURIES

The author summarizes a study of 1,200 cases of head injuries from the Los Angeles County General Hospital. This paper is primarily a statistical study of the etiology, the cause of the injury, the location of fracture, the mortality figures, and the causes of death. He finds that the automobile causes 72 per cent of these injuries. Fractures of the skull

were diagnosed in 31 per cent of the entire series, fractures of the vault being proved in 18.5 per cent by *x-ray*, and fractures of the base diagnosed clinically in 22 per cent of the cases. It is the author's opinion that basal fractures are much more common than is generally supposed, probably occurring in from 30 per cent to 40 per cent of all patients suffering from head injuries. In this group the mortality varies from 6 per cent in patients without fracture to 14.5 per cent in patients with fracture, the greatest mortality falling in the group of patients having fractures involving both vault and base.

(Craniocerebral Injuries. A Study of Twelve Hundred Cases, Warden, Delbert H. California and Western Medicine, Vol. 37:226-232, October, 1932.)

NEPHRITIS IN PREGNANCY

Doctor Stieglitz read his paper before the St. Joseph Clinical Society at St. Joseph, Mo., a very scholarly paper which he makes more impressive with 39 references. He believes that pregnancy predisposes to renal injuries because of the greatly augmented burden of renal work and because of the specific intoxication attributable in some manner to pregnancy. He believes that the clinical phenomena occurring in nephritis such as edema, arterial hypertension and cerebral symptoms must be attributed to the generalized tissue intoxication rather than purely to renal inadequacy.

(Nephritis in Pregnancy, Stieglitz, Edward J. Journal of the Missouri State Medical Association, 29:505-513, November 1932.)

LOBAR PNEUMONIA

Hanson and Calhoun present a study of 27 patients suffering with early lobar pneumonia who were treated with inhalations of 5 per cent carbon dioxide and 95 per cent oxygen. In this study there were two deaths. The gas was given on an average of five and one-half days. The shortest period of administration was three and one-half days, the longest ten and one-half days. Fourteen patients received the treatment twice a day for a period of ten minutes. The dosage was then increased. The remaining 13 patients received gas for a period of 10 minutes at 8 a.m. and 8 p.m., and

for two additional periods of five minutes each at 12 noon and 4 p.m. The disease ended by crisis in 24 patients, and by lysis in three. The authors recommend that the dosage and method of administration should be investigated further before inhalation of these gases is advocated for practical use in the treatment of pneumonia. So far as could be determined, inhalation of carbon dioxide and oxygen in this concentration is accompanied by no harmful effects.

(Treatment of Lobar Pneumonia With Carbon Dioxide and Oxygen: Hanson, J. Fletcher and Calhoun, Abner W.: Archives of Internal Medicine: 50: 269-276, August, 1932.)

DIGITALIS

Twelve patients were used in this study of the diuretic effects and changes in blood and urinary metabolites after digitalis in normal and in edematous persons. They were divided into four different groups as follows: (1) normal, (2) decompensation without edema, (3) decompensation with edema and (4) cirrhosis with edema. All the patients were placed at absolute rest in bed for the duration of the observations. They were given salt-free and purine-free diets, and a constant daily fluid intake of 1,200 c.c. Daily twenty-four hour specimens of urine were collected, and daily specimens of blood, secured before breakfast. The specimens were analyzed promptly after collection. The doses of digitalis given varied with the individual; administration was continued until signs of minor toxicity (usually loss of appetite and nausea, or vomiting) occurred. The dose ranged between 0.7 and 2 gm., with an average of 1.2 gm. for the group who showed no diuresis, and 1.4 gm. for the group who showed diuresis. The following conclusions are drawn: (1) the diuretic action of digitalis is variable, and practically limited to patients with edema of cardiac origin. The diuretic action in human subjects is accompanied by increases in the chloride and uric acid of the urine, and simultaneous decreases in the chloride and uric acid of the blood. In patients not showing increased diuresis, the metabolites of the blood and urine are unchanged or decreased, and

(2) on the other hand, the diuresis of metallic and purine diuretics is characterized by simultaneous increases in the chloride of the blood and urine, an action which is mediated, in part at least, by a direct tissue action of these diuretics and results in a mobilization of the chloride of the tissues. The effect on metabolites in normal and edematous subjects is the same. This conclusion is based on previously published results.

(Diuretic Effects and Changes in Blood and Urinary Metabolites After Digitalis in Normal and in Edematous Persons: Stockton, A. B.: Archives of Internal Medicine, 50:480-488, September, 1932.)

CORTIN IN ADDISON'S DISEASE

Baird and Albright have made a report of four patients with Addison's disease who have been treated with cortin (Hartman's extract). Of these, three were in all likelihood suffering from tuberculosis of the suprarenal glands and one from primary atrophy of the suprarenal cortex. The preparation of cortin used in all cases was supplied by Dr. Frank A. Hartman. Each cubic centimeter represents the extract of 50 gm. of adrenal cortex. The usual dosage was from 16 to 20 c.c. administered subcutaneously in four divided doses. A scientific evaluation of the efficacy of treatment is curtailed by the absence of chemical or physical variable that fluctuates proportionately to the degree of suprarenal insufficiency, and that can be accurately measured. The clinical evaluation of the efficacy of treatment rests chiefly on the following factors: (1) disappearance of nausea and vomiting; (2) restoration of appetite; (3) increase in strength and feeling of well-being, and (4) prevention of death in acute suprarenal insufficiency (this is the most important). Cortin has proved of the most value in the treatment of patients who are in prostrate and moribund condition. Thus in the clinics in the laboratory the best measuring stick of its efficacy remains the test of life or death. The writers feel that all the patients received some benefit from the treatment.

(Treatment of Addison's Disease with Cortin, (Hartman): Report of Four Cases, Baird, Percy C., Jr., and Albright, Fuller: Archives of Internal Medicine: 50: 394-410, September, 1932.)

THE PHYSICIAN'S LIBRARY

AN ARCTIC SAFARI With Camera and Rifle in the Land of the Midnight Sun, by Richard L. Sutton, M.D., Sc. D., L.L.D., F.R.S. (Edin.) Fellow of the Royal Geographical Society of Great Britain; Member of the French Geographical Society; Professor of Dermatology, University of Kansas. With more than 100 original illustrations made from photographs taken by the author, and by Richard L. Sutton, Jr., A.M., M.D., and Emmy Lou Sutton, F.R.G.S. Cloth binding, 199 pages. Published by the C. V. Mosby Company, St. Louis. Price \$2.25.

The story of an Arctic expedition of approximately two months duration made by Dr. and Mrs. Sutton, Dr. Richard, Jr., and Emmy Lou, in a chartered sealer the "Isbjorn" which sailed from Tromsø, Norway, May 23, 1932. The opening chapters include a description of Bergen and Tromsø; the "Isbjorn" and an introduction to the members of the crew. The area west and north of Spitzbergen was the "hunting ground"; at times within 500 miles of the north pole. Polar bears and walruses, whales and seals, icebergs and snowstorms; a combination as thrilling as it is irresistible. The illustrations with the descriptive matter make the reader live the experiences of the author, his family and the crew. Printed on heavy paper; large type, easily read and beautiful blue binding. A typical Sutton big-game book; an excellent addition to any library.—E.G.B.

CLINICAL GYNECOLOGY, by C. Jeff Miller, M.D., Professor of Gynecology, Tulane University School of Medicine; Chief of the Department of Gynecology of Touro Infirmary; Senior Visiting Surgeon, Charity Hospital, New Orleans. Illustrated. The C. V. Mosby Company, St. Louis. Price \$10.00.

Having just had a patient who had a sub-urethral cyst, it was particularly pleasing to me to find in Dr. Miller's book, a picture and description of the condition that fitted my own case precisely, hence my first pleasure with the book.

This is a book seven inches by ten inches, and one and one-half inches thick; contains 560 pages, with 134 illustrations, in a type that is very comfortable to read, and has the distinction in that, important considerations in technique are placed in particularly heavy type, and it seemed to me it was unusual

in that it stresses the conservative procedures. Illustrations are very clear and understandable.

The chapters on Dysmenorrhea, Sterility, and Dyspareunia are particularly full and complete.—W.H.W.

SYNOPSIS OF GYNECOLOGY, Based on the textbook **DISEASES OF WOMEN**, by Harry Sturgeon Crossen, M.D., F.A.C.S., Professor of Clinical Gynecology, Washington University Medical School, and Gynecologist in Chief to the Barnes Hospital and the Washington University Dispensary; Gynecologist to St. Louis Maternity Hospital, St. Luke's Hospital, and the De Paul Hospital; Fellow of the American Gynecological Society, and Robert James Crossen, M.D., Instructor in Clinical Gynecology and Obstetrics, Washington University School of Medicine; Assistant Gynecologist and Obstetrician to the Barnes Hospital and the St. Louis Maternity Hospital; Gynecologist to St. Luke's Hospital and De Paul Hospital. 110 illustrations. The C. V. Mosby Company, St. Louis. Price \$2.75.

This Synopsis of Gynecology is a small book, with a flexible cover, measuring five inches by eight inches, and one-half inch thick. The print is just a little small for very easy reading, yet, it has the advantage in that it contains much more than a synopsis. The illustrations are particularly descriptive. It is a book designed primarily for medical students, or for practitioners wishing to review hastily, gynecology. A very convenient book to place in the pocket or to carry with you when you travel.

The book contains 230 pages, and has more words per page than the average size book of seven inches by ten inches.—W.H.W.

THE COLON, RECTUM AND ANUS: By Fred W. Rankin, B.A., M.A., M.D., F.A.C.S., Division of Surgery, The Mayo Clinic, Associate Professor of Surgery, The Mayo Foundation; J. Arnold Bagen, B.S., M.D., M.S. in Medicine, F.A.C.P., Division of Medicine, The Mayo Clinic, Assistant Professor of Medicine, The Mayo Foundation; and Louis A. Buie, B.A., M.D., F.A.C.S., Section on Proctology, The Mayo Clinic, Associate Professor of Proctology, The Mayo Foundation. 846 pages with 435 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$9.50 net.

In this book the authors go into great detail on the anatomy and physiology of the intestinal tract from the cecum to the anus, beginning with the embryological development showing normal development and anomalies in development. For

the general practitioner they discuss in detail giving symptoms, etiology, pathology, prognosis and treatment of any disorders one might find in that part of the intestinal tract. In the treatment of chronic ulcerative colitis they show how the serum used is prepared and its administration and give a very complete diet list for such patients. For the surgeon they describe with many fine illustrations the operative treatment and procedure on all the surgical conditions found in the colon, rectum and anus with a very fine chapter on anesthesia. For any one doing this kind of work this book would be indispensable.—C.K.S.

DIAGNOSIS AND TREATMENT OF DISEASES OF THE THYROID GLAND: By George Crile and Associates. 508 pages with 164 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.50 net.

This volume by Dr. Crile and his associates is a most comprehensive treatise of the thyroid, its functions, chemistry and diseases. The relationship of the thyroid to the various other glands and organs is exceptionally well covered and the mechanism and clinical aspects of the thyroid dysfunctions are analyzed and correlated in a clear and concise manner.

In the chapters on treatment careful attention is given to prophylactic measures and to the preoperative preparation as well as fully covering the postoperative complications in every form. The operative technique is given in complete detail and is beautifully illustrated.

While this volume is the summary of the experience of the Cleveland Clinic, careful analysis and reviews of other authors writings are given full consideration. It is, as a whole, a complete and up to date summary of the present knowledge of the thyroid gland, equally valuable to the practitioner and the surgeon. The type is large and the illustrations are plain, making the book very easily read.—C.E.J.

COUNTY SOCIETY NEWS

CLAY COUNTY MEDICAL SOCIETY

The regular meeting of the Clay County Medical Society held forth at the Nurses' Home, Clay Center, Kansas, on the evening of December 14, 1932.

The meeting was called to order by the president; the minutes of the preceding meeting were read and approved; the application for membership of Dr. R. Bruce McVay of Linn, Kansas, was read and presented for ballot, and Dr. McVay was elected.

The December meeting being the annual meeting, the reports of the secretary and treasurer for the year 1932 were presented and on motion were approved and placed on file.

The society then proceeded with the election of officers with the following results: Dr. Robert W. Algie, Clay Center, was elected president succeeding Dr. W. A. Carr, Junction City. Dr. Robert W. Diver, Clay Center, was elected vice president succeeding Dr. E. C. Morgan, Clay Center. Dr. J. Leonard Dixon, Clay Center, was elected secretary-treasurer succeeding himself. Dr. E. N. Martin was elected to the board of censors succeeding himself; Dr. W. A. Carr, Junction City, was elected delegate to the state convention.

A motion was made by Dr. F. R. Croson that this society go on record unanimously supporting Dr. E. C. Morgan for appointment to the Kansas State Board of Medical Registration and Examination, seconded by Dr. Stillman. Motion carried.

Following the business meeting, Dr. O. H. McCandless of Kansas City, Missouri, was presented to the society as the guest speaker of the evening. Dr. McCandless gave a lecture on "Epitheliomas," which was illustrated by lantern slides. The presentation was in a very informal way, extremely interesting and instructive. The discussion following the lecture was ample evidence that everyone present was very much interested and awake.

Motion was made by Dr. R. J. Morton

that Dr. McCandless be made honorary member of the society, seconded by Dr. Martin. Motion carried.

Dr. Dixon requested the society to accept his resignation as secretary-treasurer for the coming year. A motion by Dr. Stillman, seconded by Dr. Morton, that Dr. Dixon's resignation be accepted. President then announced that nominations for secretary and treasurer were in order with the result that Dr. William Algie was elected for the year 1933.

J. LEONARD DIXON, M.D., Secretary.

DOUGLAS COUNTY MEDICAL SOCIETY

The Douglas County Medical Society met for its annual dinner meeting at the Hotel Eldridge, 6:00 p.m., December 1, 1932. Following the dinner, the society was addressed by Dean Raymond A. Schwegler of the School of Education, University of Kansas, on the subject, "Education and Medicine."

The annual reports were read and approved. The following officers were elected for 1933:

President, Dr. A. J. Anderson; vice president, Dr. R. B. Hutchinson; secretary, Dr. Lyle S. Powell; treasurer, Dr. E. M. Owen.

LYLE S. POWELL, M.D., Secretary.

MIAMI COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Miami County Medical Society was held in Paola December 14, 1932.

The following officers were elected for the ensuing year: Dr. P. A. Pettit, president; Dr. B. L. Phillips, secretary; Dr. Joseph Fowler, delegate to the annual state meeting. The dentists of the county were invited guests.

After the business session a very interesting lecture was given by Dr. H. M. Gilkey on "Nutritional Disturbances of Children" followed by a discussion on "Focal Infection" by Dr. C. C. Conover. These discussions were very helpful to all present and we hope to have these Kansas City men with us again soon.

B. L. PHILLIPS, M.D., Secretary.

RILEY COUNTY MEDICAL SOCIETY

The Riley County Medical Society met in regular session at the Gillett Hotel,

November 14, at 6:00 p.m.

After dinner the following business and program was completed.

The application of Dr. D. O. Jackson of Riley, Kansas, was read and referred to the Board of Censors.

Dr. Nelson read a paper on the "Diagnosis and Management of Tumors of the Mammary Glands," which was discussed by all present.

Motion carried that the next meeting be given over to report of cases and the election of officers for next year.

Members present were: Doctors Groody, Nelson, Ball, Yates, Siever and Reitzel.

The regular meeting of the Riley County Medical Society was held at Dr. Nelson's office, December 12, at 7:00 p. m. The minutes of the previous meeting were read and approved. The following officers were elected for the year 1933: President, Dr. C. M. Siever; vice president, Dr. H. T. Groody; secretary-treasurer, Dr. Ralph Ball, member of Board of Censors for three years' term.

The suggested outline of organization as prepared by the Committee on the Costs of Medical Care was discussed, and a resolution passed that the society go on record as favoring the minority report as published in the Journal of the American Medical Association, December 3, 1932.

Motion was made, seconded and passed that the society endorse the application of Dr. E. C. Morgan of Clay Center, for appointment to the state board of medical examiners.

Card of thanks was read from Dr. B. Belle Little, covering the society donation of flowers for her father's funeral.

Dr. D. O. Jackson was elected to membership.

Motion made, and carried that our society meet only once a quarter and as near midway between meetings of the Golden Belt Medical Society as possible; that the matter of choosing outside speakers be left to the program committee.

Bill of \$5.00 from Manhattan Floral Company was allowed.

The following members were present: Doctors Nelson, Siever, Schoonhoven,

Reitzel, Mathews, and Ball.

CHAS. M. SIEVER, M.D., Secretary.

SALINE COUNTY MEDICAL SOCIETY

The annual meeting of the Saline County Medical Society was held December 8, 1932. Instead of meeting at the Hotel Lamer, the usual meeting place, the members were entertained royally at dinner at the attractive home of the retiring president, Dr. Earl Vermillion.

The gathering was strictly a "stag" affair. Dr. Vermillion was not only the host, but also the "chef de cuisine," and was assisted by Messrs. Jim Cultra, T. A. Linck and C. F. Eckelman.

Preceding the election of officers, Dr. Richard Sheldon gave a talk on "Diabetes," illustrated with lantern slides. Dr. Sheldon convinced his audience that he knew his subject well, and that he had given much time and study in collecting data, especially in the form of statistics.

The following officers were elected for the ensuing year: Dr. Earl G. Padfield, president; Dr. Fred Harvey of Minneapolis, vice president. Drs. L. O. Nordstrom, Harold Neptune and J. K. Harvey were re-elected secretary, treasurer and member of the Board of Censors respectively. Drs. W. R. Dillingham and Earl Vermillion were elected delegates to the state meeting.

The secretary summarized the activities of the past year which showed that our society is in tip top condition. Eight meetings were held with an average attendance of twenty-five out of a membership of thirty-six. Much interest is manifested in our meetings, and harmony prevailed to a superlative degree. During the past year most of our speakers have been local men, the only outside speakers have been three from Wichita and one from Kansas City.

L. O. NORDSTROM, M.D., Secretary.

SOUTHEAST KANSAS MEDICAL SOCIETY

Meeting of the Southeast Kansas Medical Society, Parsons, Kansas at 4:30 p. m. Thursday, December 8, 1932.

4:30 p. m. "Intimate Experiences with Diabetes and Insulin," Dr. B. P. Smith, Neodesha.

5:30 p. m. "Resume on Diabetes Melli-

tus," Dr. O. E. Stevenson, Oswego.

5:30 p. m. dinner.

7:30 p. m. "Some Phases of Acute Appendicitis," Dr. L. D. Johnson, Chanute.

8:30 p. m. "Conditions Simulating Appendicitis," Dr. Howard E. Marchbanks, Pittsburg.

L. D. JOHNSON, M.D., Secretary.

WYANDOTTE COUNTY MEDICAL SOCIETY

At the annual election of the Wyandotte County Medical Society, Dr. C. Omer West was elected President for the year 1933. Vice President, Dr. L. V. Hill; Secretary, Dr. O. W. Davidson; Treasurer, Dr. Thomas Richmond and Censor, Dr. L. L. Bresette.

The Wyandotte County Medical Society changed their method of electing delegates. They felt they would be better represented in the state society if their delegates were elected for a term of three years. The following were elected: Dr. C. C. Nesselrode and Dr. L. F. Barney. For two year term: Dr. L. G. Allen and Dr. L. Leverich. For one year term: Dr. L. B. Gloyne and Dr. C. Omer West.

Dr. O. W. Davidson gave a splendid report of progress on the annual party which is to be held at Quivera Lake Country Club, January 17, 1933, in the form of a dinner dance.

C. OMER WEST, M.D., Secretary.

List of Physicians Licensed by the Kansas State Board of Medical Registration and Examination, December 13-14, 1932

BY EXAMINATION

NAME	SCHOOL AND DATE OF GRADUATION	ADDRESS
Allen, William C.....	Howard U., 1932.....	Kansas City, Mo.
Durrill, Everett A.....	Northwestern U., 1931.....	Madison, Iowa
Jones, William A.....	Col. of Med. Evang., 1932.....	Thayer, Kan.
Mason, Robert L.....	Howard U., 1932.....	Kansas City, Mo.
Nevitt, James R.....	U. Bellevue, 1932.....	Moran, Kan.
Shaw, Maurice M.....	U. of Illinois, 1920.....	Kansas City, Mo.

BY RECIPROCITY

Ahlefeld, Charles B.....	U. of Cinn., 1929.....	Topeka, Kan.
Barry, Jesse R.....	American Med., 1899.....	Pitcher, Okla.
Carbaugh, Kenneth W.....	U. of Tenn., 1931.....	Kansas City, Kan.
Chapman, John S.....	U. of Texas, 1932.....	Osawatomie, Kan.
Chestnut, Wylie G.....	U. of Ark., 1927.....	Galena, Kan.
DeNeen, DeEnna D.....	Med. Col. of Iowa, 1897.....	Iola, Kan.
Dowler, Vernon V.....	U. of Toronto, 1919.....	Dodge City, Kan.
Eberhart, Marjorie G.....	Okla. Med., 1930.....	Manhattan, Kan.
Feehan, William J.....	Creighton U., 1926.....	Kansas City, Kan.
Foster, Glen G.....	U. of Iowa, 1931.....	Chanute, Kan.
Haslam, Thomas P.....	U. of Nebraska, 1924.....	Council Grove, Kan.
Leisure, Clyde E.....	Creighton U., 1929.....	Atwood, Kan.
Meyer, Milo G.....	U. of Iowa, 1929.....	Manchester, Iowa
Myer, Ralph R.....	Northwestern U., 1927.....	Kansas City, Mo.
Powers, Harold W.....	U. of Iowa, 1927.....	Topeka, Kan.
Price, Vaughn C.....	U. of Tenn., 1929.....	McPherson, Kan.
Reifsneider, Joseph S.....	Rush Med. Col., 1928.....	Wellington, Kan.
Scales, William M.....	U. of Iowa, 1931.....	Hutchinson, Kan.

NATIONAL BOARD CREDENTIALS

Bowen, James D.....	Cornell U., 1931.....	Whiting, Kan.
Diefendorf, Donald M.....	U. of Louisville, 1928.....	Riley, Kan.

DEATH NOTICES

Heath, Edwin Ruthven, Kansas City, Kansas, aged 93, died October 27, 1932, of arteriosclerosis. He graduated from Homeopathic Medical College of the State of New York in 1863. He was not a member of the Society.

Henson, John H., Mound Valley, aged 66, died December 25, 1932, of pneumonia. He graduated from Kansas City College of Medicine and Surgery. He was a member of the State Board of Health from March 28, 1925, to the time of his death, and a member of the State Society.

Kenney, Chauncey S., Newton, aged 55, died December 1, 1932, of chronic myocarditis. He graduated from Detroit College of Medicine in 1902. He was superintendent of the State Tuberculosis Sanatorium at Norton from 1914 to 1929 and director of the Henrietta Brown Tuberculosis Research for sixteen months. He was a member of the Society.

Little, Charles Frederick, Manhattan, aged 96, died November 17, 1932, of chronic myocarditis. He graduated from Rush Medical College, Chicago, in 1863. He was a Civil War veteran and a member of the State Society.

Tinder, Charles R., Girard, aged 67, died November 8, 1932, of chronic myocarditis. He graduated from Marion-Sims College of Medicine, St. Louis, in 1891. He was a member of the Society.

DIPHTHERIA PREVENTION

Diphtheria is a preventable disease that can be wiped out by immunizing all children of the pre-school age, preferably between the ages of six to twelve months, with Diphtheria Toxoid.

Toxoid is a standard diphtheria toxin, detoxified with formaldehyde, and since it contains no anti-toxic serum, there is no possibility of sensitizing patients. Toxoid builds up an active, and probably a permanent immunity, that may last for life. The antigenic principle of the toxoid is relatively stable and retains its immunizing value for two or more years. Only two 1 cc., doses, given at two to four weeks interval, are required to give protection in from 90 to 98 per cent of children. The reactions, particularly in very young children, are practically negligible and when such do occur usually cause but a slight fever or induration at site of injection which quickly disappears.

As well expressed by Dr. William H. Park at the 1932 meeting of the American Public Health Association, "toxin-antitoxin has served as a good friend, toxoid is proving a better friend."

The National Drug Company of Philadelphia prepares both toxoid and toxin-antitoxin. The advantages of toxoid seem to unreservedly commend it as a more reliable immunizing agent to prevent diphtheria.

The advantages of toxoid are fourfold.

†"1. It is 20 to 30 times more powerful as an antigen.

2. Contains no serum so there is no risk of sensitization.

3. Is more stable.

4. Produces little or no local reaction.

Prophylaxis against diphtheria may be divided into three groups.

(a) Nurses and staff of infectious fever hospitals.

(b) Inmates of large institutions and schools where outbreaks of diphtheria are likely to occur.

(c) The general public, particularly young children."

The National Drug Company of Philadelphia will mail brochures on request and will include leaflets for distribution to your patients on diphtheria immunization. These leaflets contain no advertising or firm mention and give accurate and detailed information on the prevention of diphtheria. All you need to do is to give the number of leaflets needed.

†Sir John Broadbent, The Lancet, 10-15-32, fol. 523.

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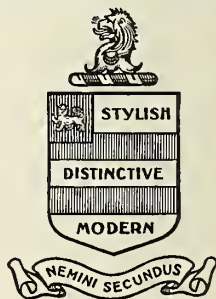
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In addition to the articles enumerated in our letter of October 29, the following have been accepted:

Lakeside Laboratories, Inc.—Ampoules Dextrose (d-Glucose) 25 Gm., 50 c.c.

Lederle Laboratories, Inc.—Neocinchophen-Lederle Tablets Neocinchophen-Lederle, 5 grains.

Mead Johnson & Company—Mead's Viosterol in Halibut Liver Oil 250 D.

H. A. Metz Laboratories, Inc.—Tablets Novocain, 1 grain. Tablets Novocain 0.01 Gm. with L-Suprarenin Synthetic Bitartrate 0.2 mg. Ampoules Novocain Solution 2 per cent with L-Suprarenin Synthetic Bitartrate, 1 c.c. Ampoules Novocain Solution 2 per cent with L-Suprarenin Synthetic Bitartrate, 3 c.c. Ampoules Novocain Solution 2 per cent with L-Suprarenin Synthetic Bitartrate, 5 c.c. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 50 mg. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 100 mg. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 120 mg. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 150 mg. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 200 mg. Ampoules Sterile Crystals Novocain for Spinal Anesthesia, 300 mg. Ampoules Sterile Solution Novocain 20 per cent, 5 c.c. Ampoules Sterile Solution Novocain 20 per cent with L-Suprarenin Synthetic Bitartrate, 5 c.c. Ampoules Novocain Solution 1 per cent, 2 c.c. Ampoules Novocain Solution 1 per cent with L-Suprarenin Synthetic Bitartrate, 2 c.c. Ampoules Novocain Solution 1 per cent with

L-Suprarenin Synthetic Bitartrate, 6 c.c. Ampoules Novocain Solution 2 per cent with L-Suprarenin Synthetic Bitartrate, 1 c.c. Ampoules Novocain Solution 2 per cent with L-Suprarenin Synthetic Bitartrate, 3 c.c. Novocain and L-Suprarenin Synthetic Bitartrate Hypodermic Tablets "K". Ampoules Ephedrine-Novocain Solution, 1 c.c.

Riedel-de Haen, Inc.—Nostal. Nostal Tablets, 0.1 Gm. (1½ grains).

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Diphtheria Toxin Diluted for Schick Test.—A diphtheria immunity test (Schick Test) preparation (New and Nonofficial Remedies, 1932, p. 395) marketed in packages of one vial containing 1 c.c. of diluted diphtheria toxin, and in packages of one vial containing 10 c.c. of diluted diphtheria toxin. Parke, Davis & Co., Detroit.

Diphtheria Toxoid.—This diphtheria toxoid preparation (New and Nonofficial Remedies, 1932, p. 382) is also marketed in hospital packages of one vial containing 30 c.c. of diphtheria toxoid. Parke, Davis & Co., Detroit. (Jour. A.M.A., November 12, 1932, p. 1691).

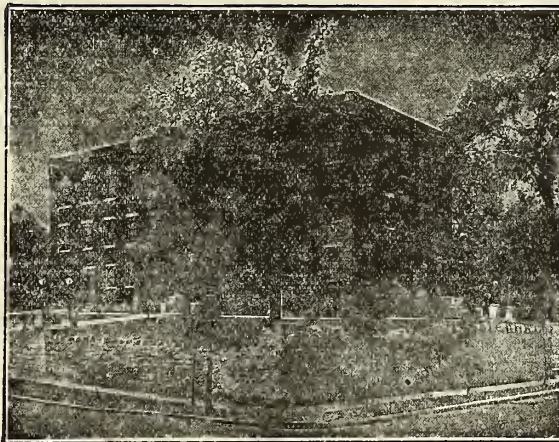
Ampoules Dextrose (d-Glucose) 25 Gm., 50 c.c.—Each ampule contains dextrose (d-glucose) (New and Nonofficial Remedies, 1932, p. 262) 25 Gm., in distilled water, to make 50 c.c. Lakeside Laboratories, Inc., Milwaukee, Wis.

JAMES Y. SIMPSON, M.D.,
Neurologist and Addictologist

HERMON S. MAJOR, M.D.,
Neuro-Psychiatrist

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Solution Liver Extract (Lederle) for Oral Use.—A hydro-alcoholic solution of an active principle of liver extract (Cohn's fraction G); ten c.c. containing active material obtained from 100 Gm. of liver (1 fluid ounce containing the active material obtained from 10½ ounces avoirdupois). Solution liver extract (Lederle) for oral use is used in the treatment of pernicious anemia. Lederle Laboratories, Inc., Pearl River, N. Y. (Jour. A.M.A., November 26, 1932, p. 1863).

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Cresca Choicest Smyrna Locoum Figs Not Sulphured (Cresca Company, Inc., New York City).—Partially dried cooked Cresca Smyrna Locoum figs from Asia Minor.

(a) Queen of Kansas Flour (Bleached); (b) Farmer Boy Flour (Bleached); (c) Country Gentlemen (Bleached); (d) Perfection Flour (Bleached) (a) Monarch Milling Company, (b) (c) Farmers Wholesale Company, (d) Interior Flour Mills Company; subsidiaries of Commander-Larabee Corporation, Minneapolis).—Hard winter wheat "straight" flour; bleached.

Rumford Baking Powder (Rumford Chemical Works, Rumford, R. I.).—A phosphate baking powder containing corn starch, sodium bicarbonate, monocalcium acid phosphate and 0.1 per cent dried egg white.

White House Brand Unsweetened Evaporated Milk (White House Milk Company, Inc., Manitowoc, Wis.,

manufacturer; the Great Atlantic and Pacific Tea Company, distributor).—An unsweetened, sterilized evaporated milk.

Hylac (Nestle's Milk Products, Inc., New York).—Spray dried homogenized mixture of milk, added milk fat and lactose, malted whole wheat extract (essentially dextrins and maltose) and a small quantity of iron citrate. The addition of prescribed proportions of Hylac to proper dilutions of cow's milk with water is claimed to produce formula preparations approximating human milk in percentages of fat, protein and carbohydrate and in caloric value.

McCormick's English Mustard Flour (McCormick & Company, Inc., Baltimore).—Mustard flour prepared from English mustard. It is claimed to be for table and cooking use and for the home preparation of mustard plaster, poultice, foot bath and emetic.

Gibbs Tomato Juice (Gibbs and Company, Inc., Baltimore).—Canned tomato juice retaining in large measure the natural vitamin content of the raw tomato juice. It is claimed to be a good source of vitamins A and B and an excellent source of vitamin C.

Dr. P. Phillips Florida Fanci-Cut Grapefruit Slices (Dr. P. Phillips Company, Doctor Phillips, Fla.).—Canned sliced Florida grapefruit sweetened with sucrose and retaining in large measure the original natural vitamin content. It is intended for all the dietary and table uses of grapefruit. (Jour. A.M.A., November 19, 1932, p. 1780).

Borden's Evaporated Unsweetened Sterilized Milk.—Peerless Brand (Spanish), Borden's Evaporated Unsweetened Sterilized Milk—Peerless Brand, Borden's St. Charles Brand Unsweetened Evaporated Milk (Spanish), Borden's St. Charles Brand Unsweetened Evaporated Milk (Nestle's Milk Products,

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Inc., New York).—Unsweetened sterilized evaporated milk.

Larabee's Little Princess Soft Wheat Patent Flour (Bleached) (Larabee Flour Mills of the Commander-Larabee Corporation, Minneapolis, Minn.).—A soft winter wheat patent flour; bleached. The flour is claimed to be especially designed for pastry and cake baking.

American Lady Tomato Juice (American Packing Corporation, Evansville, Ind., manufacturer; Haas-Lieber Grocery Company, St. Louis, distributor).—Canned tomato juice which retains in large measure the vitamin content of the raw juice used. It is claimed to be a good source of vitamins A and B and an excellent source of vitamin C. (Jour. A.M.A., November 19, 1932, p. 1863).

Propaganda for Reform

Vague Use of Terms "Balanced" or "Scientifically Balanced."—The terms "balanced" and "scientifically balanced" as applied to individual foods or to their carbohydrate protein fat, vitamin and mineral content are vague in meaning, are usually unsupported by fact, and are misleading by implying that the respective nutritional elements are naturally or purposefully proportioned one to another to provide special or unique nutritional values which adapt the foods to specific uses. Presumably the term "balanced" as used in advertising for any one food is intended to signify either that it is a complete diet containing ideal proportions of proteins, minerals, vitamins, fats and carbohydrates for optimum nutrition or that two or more of its food essentials content are ideally proportioned to meat optimum nutritional needs. The intended significance, whatever it may be, should be explicitly stated; however, such

statements shall be used only if correct for the food as used in the diet. (Jour. A.M.A., October 8, 1932, p. 1263).

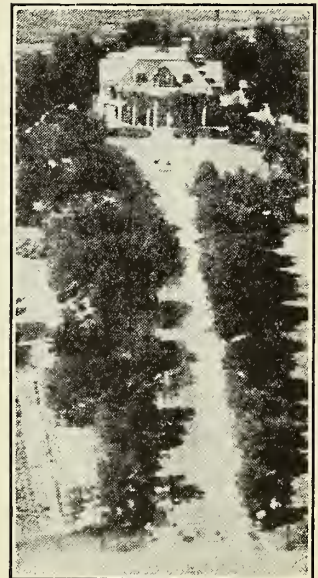
Voices Across the Rio Grande.—Station XER, just across the Rio Grande from Del Rio, Texas, is the mouthpiece of John R. Brinkley, goat gland transplant, mail-order dispenser of medicines and candidate for Governor of Kansas. The station has apparently been authorized by the Mexican government to increase its power from 75,000 to 500,000 watts, which, it is stated, will make it ten times more powerful than any station in the United States. The government of the United States stopped his broadcasting in Milford, Kan., and he built the station in Mexico to get around that prohibition. Experts in radio engineering indicate that the use of a current of such potency by the Brinkley station will interfere seriously with any station in the United States operating on a channel within 50 kilocycles of that used by the Brinkley station. Apparently, Brinkley can put potency into his radio broadcasting even if the goat glands will not perform a similar function for the misguided octogenarians, or instances of sexual impotency, psychic or otherwise, induced to submit to grafting operations by what they hear from over the Rio Grande. A letter just received by the American Medical Association from the Camara Nacional de Comercio de Nuevo Laredo indicates that Cancer Quack Norman Baker contemplates building a station at that place, presumably to promote the industry formerly exploited through his station in Muscatine, Iowa. It should be obvious to any one that the purpose of these stations on the Mexican border is to invalidate the attempts of the Federal Radio Commission to keep clean the material coming through radio channels into this country. If

THE ROBINSON CLINIC

After two years' study, the profession is in a position to evaluate the use of generalized Diathermy in the treatment of Dementia Paralytica. The following conclusions may be drawn:

1. When properly applied, Diathermy is as effective as any other form of treatment—thermal or non-thermal.
2. It is safer than malaria. The reports give less than five per cent mortality; some report no deaths in large series of cases.
3. It is more prolonged than malaria. It is necessary to have the patient under treatment for a number of weeks.
4. Diathermy is especially indicated in advanced cases, in debilitated cases, in cases where other serious conditions complicate the picture.
5. Metallic Salts, such as Tryparsamide may be used simultaneously. This cannot be done where malaria is used.

We believe we are now safe in saying that generalized Diathermy is a distinct advance and should always be considered when a doctor is deciding upon the therapeutic approach in a case of Dementia Paralytica.



Airplane View

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Assoc. Medical Director

Paul A. Johnson, M.D.
Internist

this Mexican practice is to continue without interference, American users of the radio may well anticipate for the coming years as the dominating theme of the broadcasts to which they may listen the lamenting and feeble baa-baa of the castrated goat and the blatant charlatanism of Norman Baker. (Jour. A.M.A., October 15, 1932, p. 1355).

"Bad Drugs and the Law."—Under the title "Bad Drugs and the Law," Arthur Kallet and F. J. Schlink in the "Nation" for October 19 considers three subjects—"Ergot," "Ether," and "Prescriptions." The article on ergot opens with this statement: "For an extra profit of half a cent, American drug manufacturers have helped dig the graves of thousands of women dead of hemorrhage in childbirth." Kallet and Schlink have apparently swallowed, hook, line and sinker, the preposterous and fantastic publicity which the Ambruster clique has been trying to get into newspapers and magazines for several years. This entire matter was discussed in detail in a special article published in The Journal, September 6, 1930, entitled "Ambruster, Rusby—and Ergot." In reference to ether, Kallet and Schlink say: "Next to its toleration of sub-standard ergot, we know of no more inexcusable and intolerable abuse of public confidence than the negligence and callousness that have characterized the administration's handling of the problem of impure ether sold to hospitals for anesthetic use." These gentlemen fail to support their charges with any good evidence that any patient has been harmed through the administration of sub-standard ether. On the subject of "Prescriptions," Kallet and Schlink state, in effect, that because of the small number of prescriptions that many druggists have to fill, drugs that deteriorate by keeping are used "month after month, even for years, until the last dead drop is gone." However, they do not

blame the individual druggist for this state of affairs but do blame the "drug and prescription dispensing system which mixes a minor profession with a major business." That substandard drugs have occasionally been sold and are being sold is doubtless true; probably it will continue to be true, in spite of all that officials may do to the contrary. "Substandard" drugs do not necessarily mean deliberate adulteration; drugs are subject to deterioration, variations of crude supply, and similar influences. Much more can be accomplished by finding means to correct the underlying causes than by attempting the quite impossible plan of having the government check every retail sale at every drug store. Fortunately, the great majority of the departures from the official standards are not of such a degree or kind that they menace the health of the purchaser. (Jour. A.M.A., October 29, 1932, p. 1513).

REPRINTS

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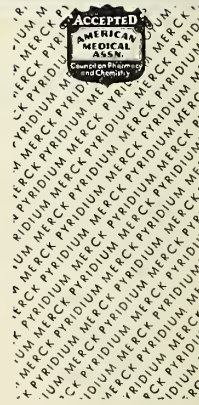
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THE JOURNAL

of the

Kansas Medical Society

VOL. XXXIV

TOPEKA, KANSAS, FEBRUARY, 1933

No. 2

ORIGINAL ARTICLES

COMMON VESICULAR ERUPTIONS OF THE HANDS AND FEET*

C. OMER WEST, M.D.

Kansas City, Kansas

The subject under consideration is broad and cannot be adequately discussed in such a brief space, but since there are indistinguishable phases of vesicular dermatosis associated with the hands and feet that are puzzling, this paper will be an attempt to simplify, where possible, some of the difficulty and to bring out some of the differentiations in the field of vesicular dermatitis.

The frequency of vesicular lesions is appalling; they have exceeded in the past few years all other types of skin lesions. The rather recent research on mycotic infection has tended to swing the pendulum to the place where the greater part of the vesicles on the feet and hands are treated as fungi.

The writer has not been able to demonstrate more than 60 per cent of the cases microscopically in this climate at the present time but Southern clinics average a much higher rate. However, the cases are becoming more prevalent in this climate in recent years due to the long summer months.

Darier and other authorities suggest that 80 per cent or more of the symptoms of dysidrosis are mycotic, and that in the typical lesions of pompholyx, mould fungi are found. Sabouraud and Brock are of the opinion that there is a true pompholyx which is not of mycotic origin. Stelwagon, Fox, Unna, Williams and others also admit such a condition as an unusual occurrence, but add that there are pompholyx—like lesions which occur on the hands—that microscopically and culturally do contain fungi. The

mere demonstration, however, of mycelium in a lesion is not sufficient evidence, as they may be found on the skin, living there as saprophytes. It is obvious, therefore, that more than one preparation must be studied together with the clinical picture which is usually quite definite in itself.

The lesions of dysidrosis and pompholyx are very similar; symptoms appear usually in the warm months, on the non-hairy areas, especially the lateral aspects of the fingers, or the palms of the hands and soles of the feet. These lesions are, roughly speaking, symmetrical and are filled with a clear fluid of a water like viscosity. New lesions appear from time to time and often coalesce to form small bullae. There may or may not be any irritation. The disease occurs in the second and third decades of life.

Time does not permit the writer to touch on each of the industrial dermatoses, since they are due to many different irritants. However, they may be grouped into three main classes—those caused from plants, animals or minerals. These lesions, belonging to either of these classes, present at times a typical series of vesicles, the most common location being the hands. It is important to delve into the patient's occupation quite carefully to find out if they are grease handlers, dyers, platers, bakers, polishers, current handlers, asphalt or pitch workers.

Overton in Great Britain showed that over 60 per cent of the 1,394 cases of industrial disease in 1927 were classified as industrial dermatoses. A number of these cases may show mycelium, but the presence of such is thought to be only secondary to the primary irritation.

The irritation begins on the lateral surface of the fingers extending over the fingers and hand, and continuing up the arm. Comparatively speaking, it spreads rapidly and is accompanied by more or

*Read at the 74th annual meeting of the Kansas Medical Society, Kansas City, Kansas, May 3, 4 and 5, 1932.

less irritation. Work generally aggravates the condition. Because individuals have been doing a certain type of work for a period of years and have escaped is not conclusive evidence that they are not receiving irritation therefrom.

Dyson suggests hyperidrosis as a common factor in the production of vesicles. The writer, however, is of the opinion that the skin loses its power of resistance either because of physio-chemical peculiarities or the chronicity of the irritant due to water solubility of substances in lipoids or some chemical change in the individual that is not understood at present.

In another rather common type of vesicular dermatosis (better known as anaphylactic dermatitis) the lesions are usually bilateral and have nearly always a period of vesiculation with periods of regression. The excitant cause is often ingested foods or drugs. When the patient complains of being irritated by certain things, the diagnosis is easier but in cases where the patient has been less observant, the elimination processes are most tedious and require the strictest co-operation between the patient and the physician.

The increasing speed in the habits of living which taxes the nervous system beyond the threshold of tolerance, due to the strain of business, pleasure or distress, has brought to the attention of the writer a vesicular eruption of sudden onset which at first presents a clinical picture of mycotic infection but which does not respond to salicylic pastes but instead becomes markedly worse under such treatment. On closer examination one finds the walls of these vesicles to be of medium thickness, filled with fluid of light viscosity, rupturing rather easily, with a tendency to coalesce even to the size of small bullae. They occur on both surfaces and more often on the hands with marked swelling and tenderness of the affected parts. The lesions are quite generalized and microscopically negative for fungi and yeast.

The sympathetic nervous system evidently plays a very definite part in this type of lesion. The exact nature or extent is nearly impossible to estimate.

However, the increasing number of people thus affected is conclusive evidence that the nerve endings in the skin are more closely connected with the general nervous reactions of the individual than has previously been considered and merits more consideration and study.

Many medical and drug dermatoses are the result of over treatment of a comparatively simple exanthematous area with everything in the family medical cabinet. The vesicles are generally confined to the treated area. They are thin walled, discrete, with flattened tops, multiform in size and usually evince a discoloration of the treated area.

One of the most common causes is the result of applying two household remedies—iodine and ammoniated mercury, or a continuous treatment of either one for several days.

The mycotic infections of the hands and feet are the most prevalent of all vesicular skin infections. The periodicity of the condition has reached a stage of almost pandemic infection. The infection may be divided into three groups—intertriginous, vesicular and hyperkeratotic. Attention is called to the vesicular type. It is this type that causes the patient the greatest distress and medical advice is sought.

The spores are long lived and are capable of living in many places for long periods of time. Specimens have been cultivated after months in a dry test tube, so one readily perceives what an attractive place bathroom floors, gym floors, locker rooms, club rooms, swimming pools, handles of tools, automobile steering wheels, golf club handles, tennis rackets, baseball gloves, or shoes, make for the fungi where it can grow almost indefinitely.

Man, generally speaking, are more prone to infection than women—due, perhaps, to the difference in attention given the hands and feet. Women as a rule give better care to their skin.

Holsey and Jordan showed in their series that male infections were nearly twice that of female. Other statistics in the University of California revealed that 85 per cent of all male students required to take gym work were infected

and that only five per cent were demonstrated culturally, and that trichophyton interdigitate was the most common vesicular type.

According to White, 25 per cent of the ringworm eruption on the hands and feet is vesicular. The writer has experienced a much higher percentage of vesiculation in this part of the country, and in Doctor Kirby-Smith's clinic in the South, a far greater percentage than here.

The ringworm vesicles are deep-seated, hard, shotty, with bluish steel colored centers, with a lighter periphery containing a heavy, sticky viscid fluid, multiform in size, showing varying ages of the vesicles and a more progressive development—a differentiation from other vesicular lesions which give rise to lesions of about the same size. The onset is often progressive and variable stages of vesiculation are found, some ruptured, containing thick viscus material, others just forming. The newer ones rupture with difficulty.

Ringworm has a predilection for the sides and lower tip of the toes and the arch of the foot leaving the heel and ball free of lesions.

On the palms of the hands the vesicles are deep and often about the thumb area. In both hands and feet the vesiculatory period runs in more or less of a cycle, but the patient's condition is always worse in warm weather. The past mild winter has caused many cases, heretofore dormant, to become active.

Williams has described a vesicular eruption of hands and feet—sometimes extending to other areas—which he calls "dermotophytid"—a condition complicating dermatophyton of the globulous skin. The onset is sudden, following an old long-standing tinea of the toes where there has been more or less maceration over a period of time. The essential feature of the sudden attack may be a sensitization of the skin changing its resistance to the mycotic infection or the toxins it produces.

The examination of vesicles for mycelial threads is a very easy procedure and should be made a part of the routine of vesicular study. The easiest method is to grasp the top of the vesicle with the

forceps, cutting it in such a way as to get some of the skin outside the lesion, placing the older lesions on top of a slide with cover glass. The portion of skin is immersed in 15 to 40 per cent KOH solution. I find 20 per cent is sufficient for most purposes for digesting the keratin about the threads. Warming the slide accelerates the procedure. The slide with cover glass is placed under low power magnification and a search for the threads and spores begun. Should none be seen at this time, it would be well to set the slide aside for an hour or two and then look again.

A specimen may be preserved by placing a drop of glycerine at the side of the cover glass. This method of preserving the slide is of value, because some mycelia are often found after many hours of corrosion.

As a general rule, efforts to isolate the fungus by culture are hardly justifiable. The percentage of recoveries is small. However, the procedure is not at all difficult as the mycelius grows readily (if at all) on Saudereaud's media.

In the past, there has been a vast amount of work done to classify these parasitic vesicular eruptions of the hands and feet. The work has been so extensive in this field, that the treatment of these lesions has been neglected.

The treatment of vesicular lesions of nervous origin is a problem. The patient's general health must be given adequate consideration. The matter of diet, and excreta is paramount. During the past few years patients are found who need relief from their mental burdens. The lesions of this type are treated with x-ray, bland ointment or wet packs and some sedative. The response is everything that could be expected. Unfortunately many patients formerly have been unsuccessfully treated with salicylic preparations.

In industrial dermatosis, Bowen has pointed out that avoidance of the exciting cause and the free use of water is beneficial. The early application of a bland ointment like cold cream and lanolin, or borafox, is advisable. The early use of a wet pack is also beneficial. Some authorities think internal medica-

tion is of little value. The writer, however, finds that an alkalized cascara mixture or bile salt preparation shortens the attack.

Pompholyx and toxic eruptions respond more rapidly to a mild symptomatic individualized treatment such as tannic and boric acid, equal parts, dram one to a pint of water used as a wet pack. Dilute potassium permanganate or aluminum acetate and boric acid pack also is helpful.

Prochinick suggests daily painting with five per cent silver nitrate or dram one of ten per cent solution of aluminated copper in one and five-tenths liters of warm water as a daily wash for the affected part. The application of one per cent salicylic acid in alcohol, formalin sponge, quartz lamp and *x-ray* are also found to be helpful.

The treatment of fungus infections is quite different, for at the present time there is no panacea. Kirby-Smith, King, Ketron, Glaze and others find one-fourth unit doses of *x-ray* exceedingly helpful. It is the most useful combatant yet found to attack fungus infection, particularly when assisted by Whitefields, full strength, or modified either in strength or by the addition of essential oils.

The use of one per cent or two per cent oil of cinnamon in two to six per cent salicylic acid ointment mixture has been successful in certain cases (it being used as a fixed dressing). The strength must be varied according to the type of skin one is attempting to treat. The wet pack is most soothing to an infection. It allays itching, relieves inflammation and congestion, softens the affected parts, promotes the opening and evacuation of the vesicles, and gives the patient needed comfort and assurance. A wet dressing applied for 24 hours has many advantages. Wise suggests at least 48 hour application of Burrows solution diluted with seven to ten parts of water. Routinely boric packs or boric and tannic acid, equal parts, a dram of either to the pint, are very satisfactory in treating acutely inflamed cases. The mistake often made in using packs is that the affected part is not kept sufficiently moist.

In cases where a wet pack is not deemed advisable, there seems to be merit in Higgin's ointment which contains three drams of acetyl salicylic acid to the ounce of bland ointment base. This has a marked anti-pruritic and analgesic effect. A borated starch paste often accomplishes a similar result.

Williams, Butler, Sharlet, Highman, Pusey and others advocate iodine in some form. My experience with this type of treatment has not been pleasing and it should never be used in conjunction with *x-ray*.

Mercurochrome is of little value as a fungicide. King, of Nashville, and many others have had similar experience. Castellano's carbolfuchsin paint has proved very effective in the south. Ethyl chlorid spray seems unnecessary as there are many other eschlorotics that are more pleasant and just as effective.

Since one infection does not confer immunity and it is so widespread, a word of prevention seems apropos. Use plenty of soap and water, and thoroughly dry the hands and feet after bathing, continuing the dryness by using plenty of dusting powder on the feet and especially between the toes. Do not exchange clothing with anyone, especially shoes. Do not step on floors barefooted. Goeckermann suggests wiping the bath and floors with a five per cent crude phenol solution. The use of formalin sponges or baths helps to keep the affected parts dry and prevent infection. During the summer months especial vigilance should be maintained in order to prevent re-infection and re-occurrence of the disease. I have found a solution of chlorinated lime to be very effective in preventing spread of the disease, especially where there are groups using the same bath. A hand full of this lime in two gallons of water is very effective. The bather should step into this mixture before and after his bath.

In summarizing let me emphasize the following points:

1. That at least one-third of all vesicular eruptions on the hands and feet are not mycotic in origin.

2. There is a definite clinical picture that is important in vesicular dermatitis.

3. The present strenuous times has brought to our attention vesicular lesions of neuro origin.

4. The use of salicylic acid mixtures as panacea in vesicular lesions should be guarded.

5. The use of x-ray has been found beneficial.

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SURGERY IN THE TREATMENT OF PULMONARY TUBERCULOSIS*

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So far this century one of the most important advances made by surgery has been the demonstration of the possibilities of proper operative procedure in certain types of pulmonary tuberculosis. Before pulmonary collapse by surgical means is undertaken, it is rather universally agreed the patient should have had sanatorium treatment over a period of time sufficient to demonstrate whether or not improvement is probable, and pneumothorax should have been tried and its failure demonstrated. However, in slightly more than one-half of the cases on which pneumothorax is indicated, sufficient collapse will not occur over the essential area. Matson¹ believes that artificial pneumothorax should be given a trial in about 20 per cent of all sanatorium cases with acute and chronic tuberculosis. He states that in about 40 per cent of the 20 per cent, pneumothorax will prove satisfactory and of the remaining 60 per cent in about one-third, adhesions will prevent the introduction of gas and in about two-thirds, adhesions will prevent a satisfactory collapse.

A thoracoplasty is indicated in about one-fifth of the cases originally selected for pneumothorax. Although not over 5 per cent of all cases of unselected pulmonary tuberculosis should be recom-

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mended for thoracoplasty, in the United States it is estimated there are 30,000 tuberculous individuals on whom thoracoplasty is definitely indicated.

RATIONALE OF OPERATIVE COLLAPSE

Pulmonary tuberculosis takes its high toll chiefly because of the incessant respiratory movement. The chief reason—rest of the diseased tissue—which makes surgery helpful is the same as for medical treatment and even after a diseased lung is collapsed, the procedure must be considered only as an adjunct to medical treatment. Surgery aids only in overcoming certain obstacles which cause medical treatment to fail. By giving a helping hand with surgery, medical treatment then can gain the upper hand in the battle. Besides giving rest, thoracoplasty collapses and approximates the walls of the cavities. When complete relaxation or compression is accomplished the secretions are largely forced out of the cavities and the circulation, which is agitated by respiratory movement is slowed so that less of the toxin-laden lymph is thrown into the circulation, as was shown by Dock and Harrison² and Kuma³. Also, Dolley and Weise⁴ and Gardner⁵ have shown that collapse of pulmonary tissue causes a lymph stasis which is thought to stimulate fibrosis. The stimulation to growth of fibroblastic tissue is exactly nature's method of healing tissue diseased by tubercle bacilli. The lessened amount of toxin-laden lymph thrown into the general circulation decreases the constitutional reaction and also lessens the likelihood of lymph-borne tubercle bacilli being carried to new situations in the lung. Cough with its concomitant fatigue is decreased when the secretions of collapsed cavities are lessened and there is less likelihood of implantation of tubercle bacilli in other bronchi. Ochsner⁶ has emphasized the importance of secondary infection of the tuberculous cavities in the prevention of healing. Cavity collapse tends to control secondary infection. As a result of the whole on collapsing pulmonary tissue diseased by tuberculosis, the general condition of the patient often quite suddenly improves.

THE SELECTION OF PATIENTS SUITABLE FOR THORACOPLASTY

When it becomes evident that the chances of medical treatment are not reasonably good and after pneumothorax has been tried without a successful result or if a less severe surgical procedure such as phrenicotomy will not answer and the tuberculosis in the other lung will probably not be relighted by collapse of the bad lung, it should be decided between the phthisiologist and the surgeon whether or not the patient presents a reasonably satisfactory risk for thoracoplasty. Although it is generally considered that pneumothorax should have failed before thoracoplasty is indicated, Hedblom⁷ believes that in the fibrotic lesions thoracoplasty is the method of choice of obtaining lung collapse even over pneumothorax as the lung will not re-expand after the pneumothorax. The risk of secondary infection after pneumothorax is eliminated and that, after all, the hazards of thoracoplasty are small.

A good many observers among whom are Alexander⁸ and Matson⁹ believe that a phrenicotomy should precede and be used as a test operation for thoracoplasty. Sauerbruch¹⁰, however, believes that phrenicotomy is not sufficient to test the possibility of relighting the infection in the other lung and Sachs¹¹ believes that more complications follow thoracoplasty in those cases in which a previous phrenicotomy has been performed. Most observers, however, agree that phrenicectomy usually should be performed preliminary to thoracoplasty and that when phrenicotomy is done, sufficient time usually should be allowed to elapse—three to six months—for the maximum benefit to have been obtained before thoracoplasty is undertaken.

Archibald¹², Sachs¹³ and many others have emphasized the necessity of limiting thoracoplasty to those cases in which there are strict indications. In general, only those cases of pulmonary tuberculosis in which the tuberculous process is predominately of the fibroid type, the active lesion limited to one lung and a return in function of the damaged lung is

not to be expected, are ideal for thoracoplasty.

Before discussing these cases, in which good results are to be expected, it seems best to emphasize the type of cases in which only poor or very bad results are most probable. Bull¹⁴ makes the pertinent comment to which all sound men agree, that progressive tuberculosis in the sound lung is the sword of Democles to the patient. Thus, when tuberculosis is present in the other lung it must be demonstrated for several months to be non-progressive (Sauerbruch¹⁰, Bull¹⁴, Stocklin¹⁵, Lorey¹⁶, Davies¹⁷, Berard and Dumarest¹⁸.) Most observers agree with Ochsner¹⁹ in the statement that thoracoplasty is of little or no value in exudative tuberculosis. The statistics of Brunner²⁰ in Sauerbruch's clinic emphasizes this point. In a group in which the process was largely exudative none were cured, only 15 per cent were improved and 54 per cent died. The smallest acute lesion in the hilum or the lower lobe of the better lung usually contraindicates thoracoplasty (Ziegler²¹, Sauerbruch and Spangler²², and Stocklin²³).

Yates²⁴ has stressed the importance of determining the cardiorespiratory reserve by means of vital capacity deter-

minations before performing a thoracoplasty on account of the increased strain placed upon the circulatory apparatus as a result of a diminution of the capillary bed. Thus, a heart without good function increases the risk sufficiently as a rule to contraindicate a thoracoplasty. One-half of Stocklin's operative deaths were due to cardiac failure.

The indications for thoracoplasty, however, cover a somewhat wider field than would be taken to be the case from foregoing comment. Thus, Hedblom⁷ tabulates the indications for thoracoplasty seriatim as follows: (1) Chronic unilateral tuberculosis; (2) Adhesions preventing pneumothorax; (3) Persistent sterile effusion; (4) Infected tuberculous empyema; (5) Fixation of lung in collapsed position after pneumothorax; (6) Excessive mediastinal displacement after healing, and (7) Severe or recurrent hemorrhage in case pneumothorax is impossible. Archibald²⁵ groups his discussion of indications under the three groups as outlined below (1) The most frequent and the nearest to the ideal is represented by the usual tuberculosis principally located in one lung and showing a marked tendency to fibrosis; (2) The second indication is found following certain



FIG. I

Previous to the roentgenogram 2 years of sanatorium treatment with attempted pneumothorax had been of no avail. Roentgenogram (August 16, 1929) of chest previous to the beginning of operative therapy. Note the large cavity in the upper part of the left lung and the amount of infiltration of the lung below the cavity. There is a smaller cavity to the left and below the larger one. A phrenicectomy on the left side was performed first. At this time he weighed 99 pounds and was on the downward grade.



FIG. II

Plate taken six months after the left-sided phrenicectomy. The smaller cavity closed after phrenicectomy but the larger cavity had remained stationary. A complete paravertebral thoracoplasty was done in March and April, 1930, in two stages, the lower ribs first. The cavity closed to two-thirds of its former size but was not completely collapsed as this Figure shows which was taken September 11, 1931, about six months after the thoracoplasty.



FIG. III

Because of hemoptosis in September, 1931, an anterior costectomy was performed and complete collapse of the cavity was obtained as is noted in this plate (taken November 11, 1931). At the present time (January, 1933) the man weighs 150 pounds and appears destined for a cure. The left lung well collapsed and the right lung has "stood up."

complications of pneumothorax, and (3) The third indication is found in tuberculosis complicated by empyema.

It will be noted that the indications (6 and 7) tabulated by Hedblom are an extension over those outlined by Archibald for certain subsidiary symptoms and in selected cases logical reasoning would suggest thoracoplasty as the procedure available, to prevent embarrassing heart action for mediastinal displacement or to gain collapse in excessive hemorrhage—other simpler means having failed. But for a practical discussion of the most common indications of thoracoplasty Archibald's grouping seems sufficient for our purposes.

Group 1. The ideal patient and the most frequent is the usual tuberculosis showing a marked tendency to fibrosis with or without cavity formation and principally located in one lung or with an arrested lesion in the good lung. In most instances pneumothorax should have been given a trial and shown to give an inadequate degree of collapse. The patient should not be too old and in fair general condition and the clinical course should not be definitely downward. The tuberculosis should show some evidence of healing in the form of cicatricial tissue contracture. Thus Archibald²⁵ has insisted that the trachea should be deviated to the diseased side. Frequently at the onset of the disease, it may have been bilateral but one side has largely cleared or has been brought to a quiescence, while the other side has gone on to fibrosis and the formation of cavities. The problem is to estimate the patient's resistance.

Resistance is shown by the degree of cicatricial contracture—the healing method of nature. Evidence of this cicatricial contracture is given by the degree of displacement of the trachea, the mediastinum, the heart, the diaphragm and the increase of verticality of the ribs. Although a fair amount of sanatorium treatment should be the rule in some cases with large cavities, which experience has taught us, seldom heal without surgical intervention, it is probably unwise to subject the patient to a long pe-

riod of sanatorium care before thoracoplasty is considered.

As subgroups in Archibald's group I, for the purpose of estimating the probable outcome Brunner's²⁶ classification of (a) favorable cases, (b) doubtful cases and (c) unfavorable cases is helpful to the careful clinician. (a) The favorable cases are the "good chronics." Most of them have cavitation and without collapse tend to gradual deterioration within a lapse of a few years. The National Tuberculosis Association classes this group as far advanced. Briefly, the patient is an adult with the disease present two years or more, in fair condition with normal or nearly normal temperature, with a predominantly unilateral involvement of the fibroid type, usually with cavitation (not larger than a pigeon's egg), a positive sputum and no sign of activity in the good lung; artificial pneumothorax should have failed. (b) The doubtful cases are those with more extensive infiltration, multiple or larger cavitation, signs of some progression of the disease, slight fever and a pulse elevation, positive sputum but with a reasonably good resistance with evidence of scar contraction. In many of these cases even with the best care the prognosis is ultimately poor. (c) The unfavorable cases are the "bad chronics" with the lesion definitely progressive, extensive cavitation, the lesion a little "soft," possibly active, some fever, loss of weight, and generally a picture of the resistance clearly failing. Frequently, the real cause for the unfavorable prognosis is questionable state of activity in the good lung. One may see more recent tuberculous infiltration which has more than likely been active a few months ago although for the time being the lesion is quiescent.

Archibald classifies his cases according to Brunner's grouping as just outlined. To give some idea of the relative results in the three groups, a resume of the results obtained by Archibald is quoted. Of the 24 favorable cases operated over one year, 16 were practically cured (66.6 per cent), from greatly improved, more moderately improved and three dead. Of 45 doubtful cases, 17 are practically cured (38 per cent), 8 were

greatly improved, nine were moderately improved, 2 were made worse and 9 died. Of the 21 unfavorable cases, not one achieved a practical cure, only 3 were greatly improved, 4 were moderately improved and 14 died. Of the 14 deaths, 8 were ascribed to the operation and 6 to the progress of the disease.

Group II. The second indication (Archibald) for thoracoplasty is found following two sets of conditions which frequently cause pneumothorax to be unsatisfactory. In the first set of circumstances, the pneumothorax is a partial one with an adherent upper lobe which presents apical compression and usually this apex contains an uncompressed cavity. In the second set of conditions the pneumothorax may be almost total but a band of adhesions prevents collapse of some essential area. As a partial pneumothorax, according to Matson, will show less than 15 per cent of recoveries, it is usually essential that farther surgery should be done. In the first set of conditions a thoracoplasty is indicated without dissent by most competent observers. Alexander⁸ has advocated in predominately apical lesions, an upper seven or eight rib thoracoplasty preceded by a phrenicectomy. When the lesions extends somewhat below the apex or if the procedure of Alexander seems insufficient, certainly a complete thoracoplasty is indicated.

In the second group of conditions, opinions differ somewhat as to the best procedure. Archibald²⁵ and Hedblom⁷ rather lean toward the idea that it is preferable to give up pneumothorax and perform a complete thoracoplasty. They reason that, in the first place, intrapleural pneumolysis—the cutting of the adhesion—is followed by from 15 to 20 per cent of empyema and, in the second place, that often the lung is rather irreparably damaged by continued pneumothorax so that re-expansion is not likely to be complete. All in all, thoracoplasty is the most efficient procedure. On the other hand, Matson ardently advocates severance of pleuritic adhesions under thoracoscopic guidance whenever the adhesion is narrow enough to be successfully severed. Matson states that he can

convert 70 per cent of the unsatisfactory cases of pneumothorax into satisfactory ones. Archibald²⁵ has in five instances opened the chest to cut a band under direct vision; in two of these cases he obtained an empyema. Jacobaeus²⁷, the originator of the thoroscope, believes that adhesions on the posterolateral aspect of the pleural cavity—especially those between the second and fourth ribs—are best suited for intrapleural division. Thus, it would seem that unless one were fairly expert in cutting adhesions through a thoroscope and extremely careful in the selection of the cases that the patient is possibly just as likely to get a satisfactory result following a thoracoplasty.

Group III. The third indication for thoracoplasty is found in pulmonary tuberculosis complicated by an empyema. After pneumothorax, more than 50 per cent develop a seropurulent effusion (Saugman²⁸ and Sauerbruch²⁹). These effusions should be divided into three classes: (1) Seropurulent effusions, (2) purulent effusions, (3) mixed infectious empyema.

In the first group of seropurulent effusions, Archibald expresses the opinion that if the effusion still obstinately recurs and tubercle bacilli are present after repeated aspirations for 6 months, thoracoplasty is indicated because of the likelihood of a seropurulent effusion passing into a frankly purulent effusion of the second class which is rather too thick to aspirate easily and in which tubercle bacilli are definitely present. Thoracoplasty is advocated by Hedblom and Archibald for this group as they are likely at any time to turn into the third class with mixed infection in which not only tubercle bacilli are found but staphylococci, streptococci and anaerobic bacilli. These cases usually have a bronchial fistula present. Thoracoplasty obliterates the pleural space, abolishes the effusion and forestalls the danger of a mixed infection. Because of the thickness of the pleura, a rather complete thoracoplasty is usually necessary to get the necessary amount of collapse. The treatment to be recommended for this final class is: First, frequent aspiration but finally ex-

ternal drainage often becomes necessary and is forced on to the surgeon. After external drainage about one-half of the cases die. In the other half improvement occurs, and a thoracoplasty is indicated to close the cavity. Archibald had 15 cases; 8 died after costectomy; on 7 cases he did a thoracoplasty and 5 were improved or cured and 2 died.

THE OPERATION OF EXTRAPLEURAL THORACOPLASTY

Brauer³⁰, an internist, who had noted the marked benefits of successful pneumothorax, first suggested that to obtain the conditions which would lead to a successful pulmonary compression in the individual in which pleuritic adhesions prevented successful collapse of the lung by pneumothorax, the resection of many ribs would give essentially the same result. On the suggestion of Brauer, Friedrich in 1907 performed the first extrapleural thoracoplasty, removing the entire lengths of the ribs from I to IX. Soon the mortality of this extensive operation was found to be rather prohibitive. Later in 1909 Sauerbruch³¹ performed a high paravertebral rib removal. In 1911 Wilms³² performed an extrapleural paravertebral thoracoplasty and demonstrated clinically that rib resection limited to the paravertebral region had the greatest collapsing effect. However, as early as 1895 Gourdet³³ on cadavers had shown the value of paravertebral resection in obtaining maximum pulmonary collapse. Up until rather recently, the Wilms-Sauerbruch operation was considered the ideal type of thoracoplasty. The operation consists of extrapleural resection of from one to six inches of the first eleven ribs from the tips of the transverse processes of the vertebrae laterally. Sauerbruch's²⁸ average resections were rib I, 3 cm.; II to V, 8 cm.; VI to VIII, 12 to 15 cm.; IX to XI, 12 to 16 cm.; total about 110 cm. The more recent new Brauer¹¹ operation, in which greater lengths of ribs are resected, is now considered the best operation. The underlying pulmonary pathology is taken as the yard stick for determining the length of the ribs to be resected. Brauer³⁴ advises resection of the upper ten ribs in approximately the following lengths:

Rib X, 10 to 13 cm.; IX, 12 to 16 cm.; VIII to V, 15 cm.; IV, 13.5 cm.; III, 12.8 cm.; II, 8.8 cm.; I, 3.5 cm. Total of 125 cm. Thus it seems that not much greater lengths of lower ribs are removed than in the Wilms-Sauerbruch thoracoplasty but very much more of the upper ribs save the first are removed.

END RESULT

Finally, the prognosis after thoracoplasty in this country may be summarized briefly by quoting the results of Archibald, Matson and Hedblom. In 112 cases excluding only cases of grave mixed infections, Archibald²⁵ had an operative mortality of 11.6 per cent, with 37 per cent clinically well. Matson¹ in 130 cases has an operative mortality of 10.78 per cent with a greatly improved and well group of 66.17 per cent of which 46.15 per cent were clinically well. Hedblom⁷ in 68 patients has 6 deaths (8.8 per cent) and 2 not improved but he states 58 of his cases are improved and most of them are well. Thus roughly from 40-50 per cent of patients subjected to thoracoplasty provided the cases have been properly selected will become symptom free and another third will be improved. The remainder die from the progress of the disease.

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GASTROINTESTINAL ALLERGY, A CONSIDERATION OF GENERAL AND CLINICAL FEATURES.*

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Since Smith's description of abdominal symptoms due to buckwheat, in 1909, there have been many contributions to the subject of gastrointestinal allergy. The incidence of this allergy was stated by Cooke in 1917 to be next to that of hay fever. Its frequency and protean clinical manifestations as well as its importance in differential diagnosis warrants the presentation of this paper.

Gastrointestinal allergy includes all primary functional and organic lesions within the enteric tract resulting from either the local or general reaction of any form of hypersensitiveness except anaphylaxis. The manifested symptoms rarely present as a distinct clinical entity, being for the most part, similar in nature to those due to infections, organic changes and functional disorders.

Several fundamentals incorporated in this definition worthy of further consideration are: 1. There are primary and secondary pathologic changes. 2. The exciting reaction may be within or without the digestive tract. 3. Several forms of hypersensitiveness may be responsible for symptoms. 4. The clinical manifestations in the main mimic other gastrointestinal diseases.

PRIMARY AND SECONDARY CHANGES DUE TO ALLERGY

Pathologies occurring secondary to the primary reaction of hypersensitiveness are of much diagnostic and therapeutic importance. When Duke¹ stated that the turmoil caused by allergy could actually precipitate organic disease, he clearly differentiates the two, nor does he make the error of considering the latter as allergic.

Edema, hypersecretion and smooth muscle spasm are the essential features of the local reaction of allergy. These changes predispose to secondary affections. The occurrence of acute appendicitis after abdominal allergy has been

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observed by Duke¹ and others on many occasions. It is quite probable that sensitization phenomena in the biliary tract can produce colic and precipitate inflammation.

The relation of allergy to peptic ulcer was suggested by Demel² in 1923, it being considered possible for ulcer to result from a lesion of the urticarial type or from one similar to that of the Arthus' phenomenon. With the meagre evidence at hand, it seems premature to assume an allergic factor in peptic ulcer. If sensitization to food prevents healing of existent lesions, or if allergic reactions in the stomach and duodenum undergo secondary changes with ulceration, then it may be said that peptic ulcer is in the first instance complicated by allergy and in the latter, the lesion (ulcer) is a secondary pathology of sensitization.

LOCATION OF EXCITING REACTION

Gastrointestinal symptoms may be due to the local reaction of allergy within the enteric tract or be a manifestation of the general reaction of a lesion occurring in other tissues.

The first condition occurs when cellular sensitization exists at one or more levels of the digestive tract. For the most part this localized response to an allergen is highly specific and is illustrated clinically by hives of the buccal mucous membrane, globus hystericus, pain and bloating in the right upper quadrant and pruritus ani in the same individual and all excited by different foods.

The local reaction is due to the intracellular combination of an antigen with its specific cell fixed antibody and the subsequent disturbances of cellular life³. The changes noted are exudation producing central anemia and edema, with circumscribed vasodilatation. Eosinophils⁴ are the characteristic cells early while neutrophils appear late in the lesion. In addition hypersecretion and smooth muscle spasm is present when a hollow viscus is affected, namely, bronchi, ureter or the intestine⁵.

The general reaction of allergy may cause intestinal tract symptoms as seen in the occurrence of epigastric pain, nausea, cramping and diarrhea with mu-

cus in the stools following a patch test for *Helenium Microcephalum* D. C.³ Duke cites insect bites, drug idiosyncrasies and serum reactions as other causes of such phenomena.¹

The systemic reaction of allergy is due to the absorption of a toxic product formed in the local lesion. It is present in varying degrees and when severe is called allergic shock. The more important features are blood eosinophilia, leucopenia, slow pulse, low blood pressure, smooth muscle spasm, hypersecretion and various changes in the blood chemistry and carbohydrate tolerance.

FORMS OF HYPERSENSITIVENESS

Hypersensitiveness is a general term which includes:⁷ 1, anaphylaxis; 2, atopy, *i.e.* hay fever, asthma and some forms of headache, eczema, urticaria, gastrointestinal conditions, epilepsy, or Meniere's syndrome; 3, hypersensitiveness of infection (tuberculosis); 4, contact sensitization, and 5, drug and serum sickness. While any form of allergy may be the cause of digestive tract symptoms atopy and contact hypersensitiveness account for enough of these symptoms to be considered in detail.

The important features of the atopic diseases are: 1. Their incidence and form as well as the age of onset is subject to hereditary influence. 2. The antibodies found in the blood differ from those of anaphylaxis⁷. 3. The clinical form of atopy depends on the localization of cells specifically sensitive. The site of reaction being influenced more by heredity than by the nature of the exciting agent, though for the most part inhalants cause asthma and hay fever and ingestants produce headache, urticaria and enteric disorders, while substances acting through contact induce dermatitis, eczema and urticaria. 4. Passive transfer may be performed in those cases where scratch and intradermal reactions are obtained. 5. Tolerance can be built by increasing doses and maintained by periodic maximum doses. 6. Skin tests are positive in better than 50 per cent of these patients.

Contact sensitization in contradistinction to atopy is characterized by: 1. The incidence is not subject to hereditary in-

fluence, 70 per cent of the white race being susceptible⁷. 2. Antibodies have not been demonstrated in the blood. 3. Sensitization exists in those tissues where contact is adequate, *i.e.* the skin, gastrointestinal tract and bronchial mucosa. 4. Passive transfer has not been accomplished⁷. 5. Repeated doses of antigen, even if small apparently increases the sensitivity. 6. Only contact testing gives specific reactions. When scratch and intradermal tests are positive they are irrelevant to the disease.

Contact sensitivity is diagnosed by the patch test in patients with dermatitis. In gastrointestinal and bronchial allergy we assume its occurrence by the history and clinical features, namely, negative family history of atopy, immediate symptoms after contact without skin reactions to the exciting agent. Atopic sensitivity to the same food usually does not produce symptoms for a period of time, *i.e.* ten to fifteen minutes, or longer. In most instances skin reactions accompany such reactions, although this is not differential.

The frequency with which patients have symptoms from certain foods, always without skin reactions and often with no history of allergy as well as the short interval between ingestion and reaction all favor the probability of contact sensitization in the digestive tract. It would explain many instances of sensitization that are atypical in occurrence and findings⁸. Thus far there is no proof that the mechanism of reaction is identical to that of contact dermatitis. The immunologic features being undetermined, one hesitates to assume that these cases represent a different type of sensitization.

THE MIMICRY OF OTHER ENTERIC DISEASES

Only a few of the allergic responses in the digestive tract are definite enough to be classified as such clinically. For the most part the clinical signs suggest an acute or chronic pathology within the abdomen, rather than the nature of the etiologic agent. Primarily, allergy causes functional disorders, not organic, though the latter may supervene and complicate the original pathology. Not all symptoms

in the abdomen relieved by epinephrine are due to allergy. In some cases distress may simulate peptic ulcer, biliary tract disease acute or chronic appendicitis or mucus colitis.

GASTROINTESTINAL MANIFESTATIONS DUE TO ALLERGY

These disorders may include: aphthous stomatitis, glossitis, angioneurotic edema of the buccal mucous membrane, tongue, epiglottis and esophagus; coated tongue, fetid breath, globus hystericus, anorexia, cyclic vomiting, pylorospasm, colic in infants, regurgitation, heaviness of the abdomen, bloating, nausea, emesis, pain in the four quadrants, horborygmus, diarrhea, with or without mucus or blood, constipation, proctitis and pruritus ani.

An acute food allergy may consist of severe cramp-like or colicky pains, nausea, emesis, rapid weak pulse, subnormal temperature, and often diarrhea with blood and possibly collapse or death within a few minutes or hours. This is known as "La Grande Anaphylaxie Alimentaire" by the French writers, while the milder form or "La Petit Anaphylaxie" is characterized by crampy abdominal pains with or without diarrhea and with or without urticaria. Vaughan⁹ describes this second form as acute food allergy and lists it as one of the two nearly typical allergic reactions, the other being abdominal pain followed by diarrhea with mucus.

ETIOLOGY

Digestive tract allergy is most often due to foods, and less frequently to inhalants, drugs, serums, vaccines, insect bites, parasites and contact sensitizations. Duke¹ lists heat and cold as well as effort with these exciting agents.

PREDISPOSING FACTORS: *Heredity:* This is a factor in atopic allergy only. In discussing this influence all too often this fact is overlooked. *Sex:* the occurrence of allergy appears equal in the sexes. *Age:* this is of importance since the frequency and probability of food allergy is greatest in infancy and childhood, but is more common through life than is generally believed. Rowe¹⁰ has done much to establish this fact. Acute forms appear early, while chronic types are seen

for the most part in the later years. *Seasons*: many patients have more symptoms during the hot months. Again seasonal foods are prone to cause distress. Examples being, strawberries, cantaloupe, or watermelon. *Hygienic*: that dietary indiscretions are responsible for some sensitizations is suggested by the frequent history of overeating with subsequent symptoms.

Intermittent use of food may tend to give trouble but the ability to react must first be present before such feedings are precipitating factors.

EXCITING CAUSES: Wheat, eggs and milk are most often responsible for alimentary reactions as they are for headache and other allergic manifestations due to food. Acute symptoms develop from the occasional ingestion of a product while chronic signs appear with a food regularly used in the diet. Therapeutically the degree of sensitivity and the difficulty of complete elimination are important.

Thus one may be relieved by avoiding whole wheat products, another can use three slices of bread with impunity, while a third may have severe symptoms from one thousandth of a grain of wheat. All too often sources of possible error are not understood with the result that there is no clinical improvement of the case.

HISTORY TAKING IN PATIENTS WITH GASTROINTESTINAL ALLERGY

It is paramount that this be a complete gastrointestinal history which includes details concerning this subject as well as all other phases of regular study.

The patient usually mentions recent distress and overlooks chronic signs of disease. The analysis of the period preceding the immediate complaint gives one a better clinical perspective and aids in reaching a logical diagnosis.

The value of the history will be in parallel with the detail, order and accuracy with which symptoms are analyzed. An outline of a typical day is sketched in order to bring out the exact time symptoms occur and the effect upon these of eating, alkali, emesis, rest, heat, cathartics, exercise, and specific foods. The course of the disease, *i.e.* the daily

weekly or seasonal remissions and exacerbations may suggest food relation in one case or an organic lesion in another, as for instance, abdominal distress in the berry or melon season and the spring and fall recurrences of ulcer distress.

The evaluation of symptoms resulting from ingestion of foods is subject to much error because food distress occurs in the following conditions:

1. Patients with ulcer may have dyspepsia from tomatoes, oranges, apples, peanuts, pork and foods with high residue.

2. In biliary tract disease bananas, peanuts, navy beans, onions, cabbage, radishes, carrots, fats, fried foods and pastries often cause symptoms.

3. The patient with so-called "irritable bowel" is aggravated by various foods, especially those with roughage.

4. Overeating. This refers to gorging one's self with food and not to the habitual taking of more than is needed to maintain weight.

5. Excessive roughage may act as either a primary or secondary cause of distress under many diverse conditions.

6. Carbohydrate or protein intolerance, *i.e.* the inability to digest normal amounts of these two foods.

7. Acute, subacute or chronic infection either within or without the abdominal cavity.

8. Pathological conditions of the heart and lung.

9. Mechanical changes, such as tumefactions, adhesions, or displacements.

10. Preparation of foods, that affect the digestability of same.

11. Food allergy. The following points are to be considered in the history:

- a. Single Dose: Symptoms occur after each ingestion. More often acute, than chronic in appearance.

- b. Quantitative effects.

1. Some foods may be taken in small amounts but full helpings in the diet are not tolerated.

2. Full helpings or excessive amounts will cause symptoms other than those experienced with small or regular helpings of the food.

- c. Cumulative effects.

1. Only repeated taking of the food

produces distress. Not as common as believed.

2. Two foods may be taken separately, but combined cause trouble.
- d. Preparation of food.
 1. A raw food may be allergic but in the cooked form causes no distress.
- e. Genito-sexual influence. Foods may cause symptoms at the menstrual period and are tolerated between times.
- f. The likes and dislikes of the patient are not indicative of allergy.
- g. The interval between ingestion and symptoms may vary from a few seconds to 72 hours.

When the facts obtained suggest allergy as a cause of the present complaint further diagnostic aid may be had from a study of the patient's family tree, his past history and the ascertaining of symptoms that indicate specific sensitization in the patient.

FAMILY HISTORY

Atopic allergy is subject to an hereditary factor the incidence, the form, and the age of onset, all being influenced by this factor. Actually we find a family tree with atopic diseases in approximately 85 per cent of the patients. This history is of the greatest value when the majority of the family, including brothers and sisters, have accepted atopic manifestations, but in no case does it offer more than presumptive aid. Failure to elicit such diseases in the antecedents does not rule out allergy because 15 per cent of these patients are without such history as are all contact sensitization unless concomitant with atopy or in a member of such family.

PAST HISTORY

Adults often suffer from a different allergy than they did in childhood. Therefore we are interested in the occurrence of eczema, food intolerance, frequent atypical colds, or afebrile bronchitis during our patient's infancy and childhood. The amelioration of these symptoms after fever indicates their allergic nature and increases their diagnostic value.¹¹

FACTORS INDICATING SENSITIVITY

The most common symptom is that of

itching and may be present about the nose, eyes, ears, soft palate, pharynx or be generalized. Other manifestations of aid include paroxysms of sneezing, alternating nasal congestion, rhinorrhea, excessive lacrimation and a tendency to develop frequent atypical colds. In others there may be an intolerance to dusts, drafts, sudden changes of temperature or physical agents. There may be apparent evidences of allergy such as wheezing or urticaria.

THE PHYSICAL EXAMINATION

For the purposes of discussion we may group physical findings as the extra-abdominal and the abdominal. The former are more apt to aid the diagnosis than the latter.

EXTRA-ABDOMINAL FINDINGS: Those enhancing the diagnosis of allergy are: 1. The hypertrophic turbinates, either bluish gray or bright red in appearance. 2. Rhinorrhea with eosinophilia in most instances. 3. The chest deformity of asthma. The increased anterior-posterior diameter; dorsal kyphosis and rounding of the shoulders being characteristic. 4. Auscultation of the chest often reveals the presence of high pitched expiratory musical rales of asthma and are not easily confused with breath sounds of other lung conditions. If these are not found in a suspected patient forced deep breathing or the pressure test of Fine-man¹² will usually bring them out. This test is often interrupted by coughing, induced by the release of mucus plugs in the bronchioles. Frequently mild asthma exists in patients with other allergic manifestations and is unrecognized.

ABDOMINAL FINDINGS: Pathological conditions within the abdomen are acute or chronic and the former may be surgical or medical from the therapeutic standpoint. Palpation of the abdomen in these acute conditions reveals involuntary or voluntary rigidity. The latter is the patient's defense and the former is a reflex muscle spasm resulting from irritation to the parietal peritoneum or somatic nerve or nerve root. In this latter case the rigidity is segmented. The acute medical conditions within the abdomen without involuntary rigidity includes

among others biliary colic, renal colic, pyelitis and those allergic manifestations localized in the intestinal structures while allergic responses involving the parietal peritoneum have involuntary rigidity.

Either type of rigidity may be seen in allergy¹³ a fact deserving careful consideration by the examiner. It will be seen that most physical findings are presumptive, not direct aids to the diagnosis of gastrointestinal allergy, exceptions of course being made to the obvious lesions of the mouth.

THE CLINICAL TESTS

In all cases with chronic abdominal symptoms clinical tests are used before making the routine laboratory tests. Meat is eliminated from the diet and the tooth brush is not to be used, during this trial. The patient is instructed to record time of eating, food used, the exact onset and type of distress and the effect produced by alkalis, rest, heat, cold, cathartics, enemas, food, exercise and position upon his symptoms. Stool specimens for the determination of occult blood are to be collected on the fifth, sixth and seventh mornings. Tests for the effect of specific foods cannot be made at this time.

LABORATORY TESTS IN ABDOMINAL ALLERGY

The indications for laboratory work are the same as in any case of abdominal disease of unknown etiology.

Where allergy is a probability one should employ skin testing, using the scratch method as a preliminary procedure to be followed when necessary by intradermal tests. How many tests shall be employed? This cannot be determined by a summary of the reactions obtained in hundreds of cases, for all too often non-specific factors account for the frequency of positive tests with some food extracts, while many important ones rarely respond. Bear in mind that the preparation of an extract is important. One may use six different extracts of potato and find only two that give skin reactions in the same case. Again, certain foods, such as banana, tomato, eggplant, spinach, or tuna fish tend to give reactions. Continued experience with the same material gives one a definite inter-

pretative advantage, because he can rule out both types of non-specific reactions at once.

If testing is used at all, it should be complete. Not because it will determine sensitizations, but it affords a means of determining the point of departure in treatment.¹⁴ Skin testing, of any type, is to the allergist what tools are to a surgeon; an aid in performing a service, not the service itself. Improvement in the diagnosis of food allergy will never come through the medium of better testing extracts. In the first place the inconsistencies between skin and cellular or organal sensitivity is such that the present accuracy of about 50 per cent is not apt to be improved upon. Even if extracts could be made that would give a skin response in every case of clinical sensitivity, the diagnosis would not be materially aided because there would be no way of determining the specificity or the localization of the sensitization by the skin reaction. For these reasons one cannot make a diagnosis of food sensitization by a laboratory procedure alone and it is unfair to the patient to create this impression. In spite of these handicaps, routine testing, correctly read and interpreted in the light of the history and previous experience with the extracts in use, is satisfactory in about one-half of the cases and should always constitute the first step in a specific diagnosis. In every instance the clinical tests, alone, establish the diagnosis.

CLINICAL TRIAL

This is necessary to establish the relation of symptoms to an allergen. Thus if a patient is relieved by food avoidance, based on skin tests, the specific factors must be determined by trial. It is relatively common for a patient to react to twenty or thirty foods and only three or four be responsible for symptoms.

Should skin tests be negative one must depend on elimination diets entirely, using Rowe's¹⁴ or those of Dale and Thornburg,¹⁵ or he may arrange a similar one for each particular patient. These should contain sufficient calories, proteins, fats and carbohydrates to maintain weight, and if prolonged, vitamin and mineral content of the food is important.

Addition diets may be used, starting with some simple food not often allergic and at intervals of three or five days adding additional foods. The symptoms produced must be interpreted as previously detailed.

DIRECT DIAGNOSIS OF GASTROINTESTINAL ALLERGY

This can be made only when one is able to establish a specific relation between foods and symptoms. When we examine a patient and find wheezing and musical expiratory rales interspersed with moist rales it is obvious that we are dealing with allergy, the question being: What allergen and the type and degree of complications? However in the enteric tract specific sensitization loses its stellar etiologic role of asthma and hay fever and becomes one of many possible causes of symptoms. The most important thing about abdominal allergy is to consider it in the differential diagnosis.

Presumptive aids are: a family history of allergy; the presence of other sensitization phenomena or a past history of such disorders, as well as the presence of signs indicative of hypersensitiveness.

Therapeutic confirmation may be had from the use of epinephrine or ephedrine in some cases.

One should never defer surgery on the probability of allergy in acute abdominal conditions. In chronic cases there is no "allergic diagnosis" per se, a gastrointestinal study being in order and it should include allergy as well as all other causes of symptoms. A knowledge of allergy does not warrant diagnostic and therapeutic excursions into the realm of gastroenterology unless supported by an adequate experience in this field of medicine.

DIFFERENTIAL DIAGNOSIS

Allergy of the digestive tract, because of its mimicry, incidence and variety of symptoms enters frequently into the differential diagnosis of enteric tract disorders.

In the upper abdomen food allergy may give rise to signs that superficially mimic ulcer. If one will study these cases with care there can be little confusion between the two. What is most important is to recognize both syndromes

in the same patient, and give adequate and specific treatment. If allergy be a cause of ulcer, it is not justifiable to say food causes ulcer distress.

Graham, Cole, Coppher¹⁶ consider food allergy as the third most important condition in the differential of biliary tract disease and as Rowe¹⁰ has remarked, the condition listed second, mucous colitis, is often due to allergy.

Allergic symptoms may be present in the right lower quadrant and be confused with appendicitis, especially if there is involuntary rigidity and pyrexia. Usually the other findings are not compatible with the blood picture, *i.e.* the low nuclear index and eosinophilia.

Food sensitivity most certainly must be considered in all cases of irritable bowel, colonic disorders, carbohydrate and putrefactive dyspepsia, as well as in pruritus ani.

TREATMENT

The treatment is initiated on the basis of skin testing. When correct, the demonstration of the specific factors and their avoidance completes the usual therapy. Should treatment based on laboratory tests fail to relieve symptoms, elimination diets, either standardized ones or those devised to meet the needs of the patient are used to demonstrate sensitivity and specificity.

In either case complete elimination or partial avoidance may be necessary, depending on the degree of allergy. When common foods are involved, desensitization by the feeding method may be tried. It is not highly successful in the main. Subcutaneous injections of food extracts is even less apt to be of aid.

In every case one should combine recognized digestive tract therapy with allergic management. Usually the diagnosis and treatment are concomitant, when the former is completed, the latter has in most instances been accomplished. Repeated tests should be made to determine the period of each sensitivity.

SUMMARY AND CONCLUSIONS

Gastrointestinal allergy includes only the primary lesions induced by the allergic reaction. These changes predispose to secondary pathologies of great importance.

The exciting reaction may be within or without the enteric tract and may be induced by one or several forms of hypersensitiveness, atopy being the most common.

Digestive tract symptoms due to allergy mimic other gastrointestinal diseases and rarely present as a distinct clinical entity.

Lesions may occur at any level of the tract. They may be induced by a single ingestion, cumulative or combined effect of a food or foods.

Food is the commonest cause of enteric tract allergy and is more frequent in children than in the adult.

A gastrointestinal study should incorporate details concerning the family and past history of allergy as well as an evaluation of signs indicative of sensitization in the patient. Interpretation of food distress is to be made with care since there are many types.

The differentiation of acute abdominal conditions is to be made with caution, error being toward an infectious lesion with surgery rather than that of allergy and delay.

Skin testing is to be done along with other laboratory procedures, never alone. In every instance clinical trial is the means of specific diagnosis.

The direct or differential diagnosis is not difficult if one will consider the probability of allergy in atypical acute and every chronic abdominal condition.

Treatment is successful in parallel with the correctness of the diagnosis. It should be aided by general medicinal and hygienic measures. The inability to maintain health and avoid exciting foods may complicate therapy.

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—R—

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

A Possible Danger of Enterostomy in the Treatment of Intestinal Obstruction

THOMAS G. ORR, M.D.*

The indications for enterostomy are not well understood. Undoubtedly this treatment is many times misused. Too often the method is a last resort procedure which offers little hope of success.

The following two case reports illustrate a danger in the treatment of acute intestinal obstruction when enterostomy is too much depended upon.

Case 1. M. McG., a white male, aged 32, was admitted to the University of Kansas Hospital on April 22, 1932.

This patient's symptoms started five days before admission. During the five days he vomited several times each day. Everything taken by mouth was vomited. Numerous cathartics failed to give any relief. On admission, the patient appeared quite ill. In his past history there were reports of similar attacks, but these were relieved by cathartics.

Examination revealed a mass in the region of the sigmoid and the abdomen was markedly distended. x-Ray taken at this time showed abundant gas in the small intestine. Temperature was subnormal and the pulse somewhat elevated. A diagnosis of acute intestinal obstruction was made with cause undetermined.

The blood chemistry studies showed a urea nitrogen of 94 milligrams per 100 cubic centimeters of blood, carbon dioxide combining power of 76 and chlorides of 230. These are typical blood chemical

* Department of Surgery.

changes found in acute high intestinal obstruction.

The patient was immediately given 400 cubic centimeters of 4 per cent sodium chloride intravenously and 1000 cubic centimeters of physiologic sodium chloride by hypodermoclysis. Three hours after admission he was taken to the operating room and a Witzel operation done through a left rectus incision. Very little exploring was done. However, a mass was felt in the pelvic region, the nature of which was not determined. There was no evidence of peritonitis.

This patient improved after sodium chloride treatment and intestinal drainage. On the morning of the second day, he suddenly became worse and died two days after admission.

At autopsy a mesenteric cyst was found which had caused a volvulus of the lower ileum near the cyst. The gut was constricted and at this point a perforation had occurred, causing peritonitis. Evidently the perforation occurred about 36 hours following the enterostomy.

Case 2. J. B., a white male, aged 62, was admitted to the University of Kansas Hospital on March 15, 1932. His symptoms began six days before admission, when he had a sudden cramp-like pain in the lower abdomen. He vomited every day after the onset. Cathartics were given without results. On admission to this hospital, he presented a picture of acute obstruction. He was markedly distended and evidently considerably dehydrated. Blood studies showed an increase in the urea nitrogen and a decrease in the chlorides, typical of acute obstruction of the small bowel.

An enterostomy was done. He improved for five or six days when he suddenly grew worse and died, 13 days after admission to the hospital, with a gas bacillus infection in the abdominal wound and diffuse peritonitis.

Autopsy showed an obstruction of the lower ileum due to adhesions about two feet from the caecum. An ulceration just proximal to the obstruction had perforated, producing peritonitis. It is quite evident that the perforation occurred several days following the enterostomy.

COMMENT

Both of the patients were dangerously ill, and the enterostomy was done to relieve a rapidly distending small intestine, and to prevent, if possible, a total paralysis. In each instance good drainage from the enterostomy tube was obtained, indicating that peristalsis was still active. In each case perforation occurred after the enterostomy was made. When the abdomen was opened at operation the exact cause of the obstruction was not found in either case. However, it was definitely determined that there was no peritonitis or gut strangulation present at that time.

On the basis of the findings in these two cases, it is suggested that when enterostomy is done as a preliminary treatment of small intestine obstruction, a second operation be done as early as possible to relieve the occluded bowel. The possibility of perforation at the site of an obstruction must be kept in mind.

—R—

Nuss Research Laboratory.—Physicians in various parts of the country are receiving advertising material in the form of mimeographed typewritten circulars from the Nuss Research Laboratory of Elkland, Pa., which seems to be a name used by Dr. W. Nuss. A few years ago Dr. Nuss seems to have been one of the disciples of the late Albert Abrams, at the time that the latter was exploiting his "electronic reactions"—the most preposterous piece of medical buncombe of the country. Dr. Nuss today is featuring what he is pleased to call the "Master Hormones." In the advertising matter that he is sending out, we are told: "These hormones are derived from the Medulla Oblongata and the uterus in the female and from the Medulla, Oblongata and the Prostate in the male, and are in health about fifteen times stronger than any other hormones found in the body." The Master Hormones are put up in tablet form and "are made in two-grain size by one of the best homeopathic manufactures [sic!] in America." The Nuss Research Laboratory has selected six remedies which they "believe will meet the approval of most physicians" as follows: "No. 53—Prostate and Medulla (male). No. 54—Uterus and Medulla (female). No. 55—Hormones from male egg (male). No. 56—Hormones from female egg (female). No. 57—Vegetable Hormones (either sex). No. 58—Biological Hormones (either sex). Dr. Nuss also notified the profession that his "laboratory service is open to all of our drug users." Most important, however, is the claim made that where the physician is uncertain about the diagnosis, Dr. Nuss states "We can make a Positive Diagnosis for a small charge." The profession will learn with interest from some of the material sent out by the Nuss Research Laboratory that hyper-alkalinity is the real cause of heart disease and that Nuss Research Laboratory's "No. 49" will relieve it in ten days. Dr. Nuss also states that "tuberculosis associated with carcinoma of the lungs" is curative while "hyperthyroidism is reducible in two weeks" by the use of "our 55 or 56." (Jour. A.M.A., October 29, 1932, p. 1529).

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

Poverty and tuberculosis go hand in hand; so runs the doctrine preached for a score of years. Some even regard the tuberculosis death rate as a rough barometer reflecting the fluctuations in the economic state of the people. For more than three years hard times have blighted the country; few have escaped its evil effects. Yet the tuberculosis mortality rate continues to decline. How can this paradox be explained? No authoritative answer is available and none would be so rash as to predict a continuation of the downward trend. But a consideration of some of the influences that undoubtedly play a part in this phenomenon may suggest what steps in the future must be taken to sustain the present favorable trend.

Effect of Depression on Tuberculosis

The tuberculosis death rate for 1930 in the United States reached the low point of 71.5 per hundred thousand population. Unofficial but reliable estimates for 1931 show a rate of approximately 67 per hundred thousand. The Metropolitan Life Insurance Company calculated that at the end of the third quarter of 1932, the tuberculosis death rate had declined 6.9 per cent as compared with the like period of 1931.

Deaths from tuberculosis come mostly from that group who have had the disease for some time. Among the tuberculous population at any given time there are always some whose fate hangs precariously in the balance. A slight downward push on the scale such as hunger or worry, is likely to bring the struggle to a premature end. Apparently there are not enough such "critical" cases of tuberculosis among the "new-poor" to affect appreciably the mortality rate.

We are not certain however that hard times are not increasing the morbidity of the disease. Assuming the average expectancy of the consumptive to be five years, the present effects of deprivation, even though temporary, may shorten that expectancy. Furthermore, our present

understanding of the manner in which tuberculosis begins and develops, justifies us in assuming that environmental influences often determine whether or not a child with early lesions will later develop the destructive adult type. And many children now heavily infected but not yet labeled "tuberculous" are suffering deprivation. Thus the toll of the enemy may be so "absorbed" in the years to come as to show no definite "hump" in the mortality curve.

Aside from these probabilities why has the mortality rate not yet reflected the effect of poverty? While poverty and tuberculosis are closely related, there is nothing about poverty *of itself* that favors the disease. The sole, direct cause of tuberculosis is the tubercle bacillus. Without infection by that specific germ, even Job's turkey could not possibly develop phthisis. But the *by-products* of poverty are the active allies of the enemy.

One such by-product is faulty nutrition. We have not thus far permitted this by-product to overwhelm us. Luxuries, comforts, and even self-respect may have to be sacrificed by many people, but old-fashioned starvation for the sheer want of bread is a disgrace we are determined not to suffer. Nor is the nutritional quality of food being sacrificed to any great extent. During the war, the hunger of European peoples was appeased by filling their bellies with food substitutes of poor nutritional value. Not so in the present crisis. True, the consumption of milk has decreased somewhat, but on the other hand, the cheap price of butter has enlarged sales of that article at the expense of butter substitutes. Meats, vegetables, and fruits have dropped to a price level that discourages the competition of foods of lesser nutritional value. Allowing for the concessions many families are making, we still may safely assume that no widespread harm has as yet been wrought because of poor nutrition.

Another by-product of poverty is the crowding together of families, which in turn favors the ready transfer of the tubercle bacillus from the sick to the well. Domiciliary crowding has not yet

been severe. The inhuman huddling of several families in quarters designed for one, as was so common during the war, has been mitigated by lowered rentals. Incidentally, the experience in German cities in the post-war period indicates that food shortage rather than crowding is the significant factor in causing an increase of the rate. During the blockade when food supplies were cut off, the tuberculosis death rate rose to unprecedented heights. When the blockade was lifted this rate declined precipitately to its former level, though the housing shortage continued as before.

A third by-product of poverty is shattered family morale. "What's the use!" is the attitude of the discouraged family. Slovenly habits creep in. Why wash the dishes carefully? Why not spit on the floor? Why keep the appointment with the doctor? Carelessness and numbness subtract their toll from one's capital of resistance. Deplorable situations are evident, but in the aggregate we have kept our courage to the sticking point, and the pessimism that now presides in many households has not yet become chronic.

MOMENTUM OF THE MOVEMENT

An important factor responsible for the continued decline of tuberculosis deaths is the cumulative effect of the tuberculosis movement. For a score of years, educational propaganda has been rolling up its force; its momentum has been slackened only slightly by the present pot holes in the highway of progress. Knowledge acquired in the past has not lost its power; our respect for tuberculosis has not lessened; habits and practices acquired in the good days continue to function in the bad.

But perhaps the most pertinent answer to the question as to why the death rate has not taken an upward turn is to be found in the tuberculosis fighting machinery that is now functioning. It is, of course, inadequate, but in no previous depression have we been so well equipped. Some eighty thousand patients are at the moment occupying sanatorium beds, which means not only that eighty thousand persons are being given their chance, but also that as many potential foci of infection are removed from the

susceptible community. More thousands, graduates from tuberculosis institutions, are exerting their wholesome influence wherever they may be. The sanatorium is doing "business as usual," in fact, almost 1,000 new beds have been added (in the U. S. A.) during the past year. Nor has there been an appreciable lessening of clinic and medical activities. Greater skill and precision in diagnosis and treatment are practiced by the doctor than ever before. Health department budgets in several places have been curtailed, but without seriously lessening the efficiency of the service rendered. Public health nurses' salaries have suffered reduction but not the quality of their work. Tuberculosis associations have trimmed their sails, but the educational and publicity work goes on unabated. Research has not stopped, and demonstrations gaily carry on.

CONTROL MACHINERY WORKS

The machinery has clicked on despite the depression. The fact that this "variable" has *not* changed (except for the better) whereas the other traditional variable, namely, the economic factor, has changed, and that, in the face of this, the tuberculosis rate has not increased, is indirect but persuasive proof of the efficacy of our present method of attacking tuberculosis.

Epidemiology teaches that human skill apparently avails little during the height of an epidemic. But when the foci of infection begin to decrease in number, organized effort bears fruit and accelerates the decline. When the disease foci are finally reduced to a minimum number, the epidemic is "under control." Has the age-old epidemic of tuberculosis reached the point where the active cases are so few that the disease may be "controlled" regardless of unfavorable circumstances?

Whatever the answer,—the danger of over-confidence must be avoided. Human nature, notoriously fitful and fickle, must be reckoned with. Experience shows that a populace plagued by a disease enemy may be roused to such a pitch as to depress the danger to a vanishing point. When the threat lessens, interest lags, vigilance relaxes, and then the enemy

sweeps once more into the unprotected ranks. For this reason the history of smallpox since Jenner's time is one of sporadic recurrences alternating with periods of quiescence, but never of complete conquest.

The anti-tuberculosis crusading spirit of bygone days drew its power chiefly from deep emotion. As the stimulating reminders of the disease have grown fewer, interest has lessened. It is necessary in these days to replace the old fire with a persistence born of intellectual understanding. For this, leadership of the medical profession is essential. The fact that the traditional and powerful contributing causes of tuberculosis may now be, and are presumably being, "neutralized" by medical skill in diagnosis and treatment, is a tribute to scientific medicine and its practitioners.

—R—

LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

I am pleased to acknowledge your letter, and I wish to say the grades are not unsatisfactory. However, knowing that you could have done better, I am not going to grow too enthusiastic. As near as I can learn, the average student seems to have his cup of joy pretty well filled if he keeps from being flunked.

You have moved to Rosedale and from now on will make an attempt to apply the knowledge you have obtained in laboratory and dissecting rooms. Heretofore your study has been devoted to the fundamentals such as anatomy, physiology, chemistry, etc. You have spent long hours in the dissecting room under skilled demonstrators possibly wondering why it was important to learn the minute anatomy of certain parts or why necessary to memorize a long list of complicated terms. Probably some of the knowledge you acquired will not be used and probably your instructors were aware of this fact. However, this is part of the ordained course and therefore it has been your duty to follow it out. So if you have learned nothing but obedience to discip-

line your study has not been wasted.

There is arising a feeling among a great many in the profession that there should be a change in the course of study for medical students; that there is more or less waste of effort when the young fellow devotes four years of the alert, receptive period of his life to obtaining a pre-medical rather than a medical education. Personally, I think that the young man out of high school with the profession of medicine in view would make a better doctor if he had more or less clinical work right from the start. Of course, if he has been fortunate enough to have had good boy scout training, he is a fair doctor to start with. Then if he could master warts, moles, boils, and ingrowing toenails during his four years pre-medical and first two years of regular medicine, he would be well along in his career when he puts aside the dissecting knife and tackles man on the hoof. But like a lot more of my old-fashioned ideas, I fear it will be a long time before this will be seriously considered. The old way of beginning the study of medicine under a preceptor—that is, going into a good doctor's office at the start—had many excellent features to recommend it and probably did more to develop initiative and self-reliance than the present system. Now the science of medicine has developed to the extent that practically all teaching is done by specialists. This has gradually progressed to the extent I am informed there sometimes exists jealousy among these men when someone accidentally or otherwise oversteps his special line. I am told that the nose surgeon when operating who accidentally drops a finger stall in the patient's mouth is ethically bound to call the throat surgeon to retrieve it—merely going to show that no system is without its drawbacks. I am glad this condition of affairs does not exist in our western schools.

In your last letter I was impressed with the erudition shown or rather exhibited but was not surprised. The technical terms which flowed from your pen with easy familiarity gave your mother quite a thrill, and I noticed she applied herself to my medical dictionary with

considerable zeal for a few days. I purposely refrained from commenting knowing that it would be but a question of a short time until she must unburden herself. She opened the subject by remarking "it must take a lot of study to learn such technical terms, and I suppose it is absolutely essential to know them." I informed her that these were words of euphony only, (better look this up), and the awful disease with the terrible long name you had so familiarly used is found in South Africa and only in goats. I tried to puncture your little balloon in a quiet ethical manner for I well remember my own experiences along this line. It gave me quite an exhilaration when writing to mother and sisters to air my vocabulary of rare scientific words, and it never failed in its intended object. However there was one member of the family who never seemed duly impressed and that was my father, a practical doctor of the old school. In a confidential moment, he advised me "son your practice will probably be greatly confined to the United States of America for a number of years or until you are properly recognized. The nomenclature of diseases of the skin of the South Sea islands is interesting and impressive, but is not the paramount issue. Better brush up on yellow jaundice and itching piles—your international recognition may be somewhat delayed but your standing at the local bank will improve *pari passu*." The *pari passu* had the desired effect and in the many years that have elapsed I have never looked upon this but as a bit of sound advice. You may think this over and pick out the kernel of wheat, if there be one, from the surrounding chaff.

We are still in the dumps of the depression. No one seems to have any logical solution for the problem except possibly Mrs. Roosevelt. She has gone on record as saying the girls should have themselves carefully tested about the second year of high school to determine their booze displacement and not go beyond this limit. This suggestion probably has merit and might logically be carried further. First there should be a bureau created. Next to a well stocked sideboard comes a bureau. The young

lady could take the prescribed test and be given a traveling or union card stating temperament, capacity, etc. For instance—Ethyll Smyth, age 19. Blond, affectionate, moderately dumb, weight 130. Passes out on three bottles of home brew usually about 11:45 p.m. May be handled anytime after 10:30. Entertained at low cost. Thinks champagne is a kind of hysteria, etc., etc. I imagine Mrs. Roosevelt had something of this kind in mind when she took her pen in hand. Still I am not sure that she made a big hit with the ladies of Kansas and as a vote getting helpmeet I fear the president is going to be disappointed in her at times. I believe if I were president I would brag on her biscuits and refuse to eat any others. Or she might be encouraged to join the Royal Neighbors or the Rebeccas and take an active part in the tableaux. Of course up to date no great damage has been done, but I fear unless Francis has a little quiet talk with his good wife she is going ahead and be the cause of him losing good votes in 1936. And anyway why stir up the ladies unnecessarily?

I did not intend to run this letter into politics, but there is always a temptation to touch on current things and sometimes I am not strong enough to resist.

Love,

DAD.

P. S. On second thought I think you had better run in a few long words in your letters.

—R—

Irradiated Surgical Antiseptic.—The discovery in medicine of any new technic or process leads promptly to extended research with similar measures. Last year, Eising reported encouraging results by treating purulent wounds with irradiated petrolatum. This report led Ross to test the effects in vitro of such irradiated surgical dressings. Briefly, Ross found that a 2:1 mixture of petrolatum and hydrous wool fat, after ultraviolet irradiation for four hours, had acquired a sufficient bactericidal power to kill *Staphylococcus aureus* and *Bacillus pyocyaneus* within twenty-four hours. Ross is inclined to attribute the new antiseptic properties to "secondary ultraviolet emanations" held by the petrolatum-hydrous wool fat mixture, a conclusion previously drawn by Eising. There is nothing in Ross's data to suggest a clinical superiority of this unknown "emanation" antiseptic over ordinary commercial antiseptics added to nonirradiated mixtures of petrolatum and hydrous wool fat. Far more extended and controlled researches are necessary before such results are permitted to breed new proprietary remedies. (Jour. A. M.A., October 15, 1932, p. 1356).

COUNCIL MEETING

The Council held its mid-winter meeting in the Huron Building, Kansas City, on Tuesday, January 17, 1933. The meeting was called to order by the president, Dr. J. D. Colt, Sr., at 10:45 a. m., who made a short talk urging a constructive program. Others present: Doctors Geo. M. Gray, R. T. Nichols, L. B. Spake, E. C. Duncan, O. P. Davis, J. T. Axtell, J. F. Gsell, C. C. Stillman, H. O. Hardesty, I. B. Parker, C. H. Ewing, W. F. Fee, Earle G. Brown, and J. F. Hassig.

On motion regularly made, seconded and carried, Dr. Gsell was made acting Councilor for the 6th District, vice Dr. H. N. Tihen who is in Europe.

A motion was regularly made, seconded and carried that the president appoint a committee of three to draw up a resolution concerning the death of Dr. P. S. Mitchell. The Committee, Doctors Duncan, Axtell and Brown presented the following resolution:

"Paul Stafford Mitchell, M.D., President of the Kansas Medical Society, and Councilor from his district for many years, died at his home in Iola, December 29, 1932.

"The Council of the Kansas Medical Society in session this 17th day of January, 1933, wishes to enter in the records of its proceedings its appreciation of his character and his valuable services to our organization.

"We hereby express our sorrow at his untimely passing and shall long revere his memory.

E. C. DUNCAN,
J. T. AXTELL,
EARLE G. BROWN."

It was definitely decided to hold the Seventy-fifth Annual Meeting on Tuesday, Wednesday and Thursday, May 2, 3, and 4, 1933, at Lawrence. The second day of the meeting will be guest day and at least five addresses will be given by speakers of national reputation. The first and last days of the meeting will be devoted to papers by our own members. The other details of the program was left in the hands of the Program Committee. The secretaries complimentary luncheon will be held on Tuesday, May 3, at 12:15 p. m. The Council will

hold its regular meeting at the same time and place. The House of Delegates will hold its first meeting on Tuesday, May 3, at 7:00 p. m.

The Student Loan Committee made a verbal report stating that they did not consider this the proper time to take up such a proposal which was unanimously endorsed by the Council.

The matter of proposed legislation was discussed and it was recommended that the Committee on Public Policy and Legislation endeavor to secure four minor changes in our Medical Act and one pertaining to the State Board of Health, viz: 1. Change paragraph referring to composition of members of medical board and board of health. 2. Add a section requiring annual registration of all physicians. 3. Strike out clause exempting osteopaths and chiropractors. 4. Add a paragraph giving secretary of medical board power to pay clerk hire when needed.

The proposed change to the Crippled Children Law as presented by our Committee on Crippled Children was adopted and the Committee on Public Policy and Legislation was instructed to sponsor it.

A motion was regularly made, seconded and carried that if the Legislative Committee needed any assistance during the Legislature that our Defense Attorney, Mr. J. D. M. Hamilton, be employed and that the amount expended should not exceed \$250.

Dr. J. F. Gsell, Chairman of the Committee on full-time secretary made the following report:

Mr. President and Gentlemen of the Council:

Inasmuch as the five members of this committee are not in full agreement, I am submitting the opinion of each briefly:

Dr. Nesselrode's convictions are as follows: (1) A full-time secretary is worthy of careful consideration; might be considered a goal toward which we should be working. (2) According to Crownhart, lay secretary of the Wisconsin State Medical Society, it cannot be undertaken without an adequate financial set-up; that it will necessarily in-

(Continued on Page 79)

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

ASSOCIATE EDITORS—R. T. NICHOLS, L. B. SPAKE, E. C. DUNCAN, O. P. DAVIS, J. T. AXTELL, H. N. TIHEN, C. C. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

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The Journal of the Kansas Medical Society is not responsible for statements, methods or conclusions presented in any article other than by the editorial staff.

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EDITORIAL

SOCIETY MEMBERSHIP

Attention is called to the fact that all memberships automatically expired December 31. Dues, therefore, were due and payable January 1, 1933. By-laws of the society provide for suspension of members whose dues are not paid by February 1; provision is made for reinstatement during the year on payment of all indebtedness.

By virtue of membership in the county medical society, the member is also a member of the state society and the American Medical Association. Fellowship in the American Medical Association requires the filling in of a fellowship application; endorsement by the secretary of the state society and annual dues of \$7.00. Subscription to the *Journal of the American Medical Association* or other publications of the Association, is included in the fellowship dues. The county medical society is the basic unit

in organized medicine as applicants may be admitted only through approval by the county society.

Additional advantages of membership in the local county and state society include: benefit of the medical defense fund for protection against malpractice suits; preference for appointment as examiner for life insurance companies; gives a greater chance for employment by industrial corporations and indemnity companies; provides the spirit of fraternity which is so much needed among physicians; offers the opportunity for professional contact, and receipt of the official publications of the society.

Membership in the local county and Kansas Medical Societies is valuable. Your secretary will be pleased to accept payment of your dues for 1933, provided you have not already renewed your membership.

MALPRACTICE SUITS*

One would hardly think that a woman would bring suit against a doctor because she felt that she should have been delivered by cesarean section because her labor was protracted—yet such a suit was recently filed.

In the use of a therapeutic lamp one would think that a sun-burn would be the worst that could happen—but recently a celluloid comb caught fire and severe burns and loss of hair occurred. Caution: Be personally sure all combs and pins are removed.

When engaged for obstetrical care and you are away it is your business to provide for attendance.

Be guarded to whom you make reports of physical condition. Recently a doctor made a report to a factory nurse. The man lost his job. He sued the doctor and obtained a judgment for libel.

* Jour. M.S.M.S. January 1933.

If you make an examination for an insurance company be sure the patient so understands. Never answer on an insurance blank the questions relative to past illnesses or present conditions that are not related to the immediate claim. You become liable if you do, without the patient's written consent. Never report to an insurance company any operative findings of a former patient applying for insurance.

No instructions given to a minor will protect you in a suit.

Hospital counts of sponges is no defense. The surgeon must know that all sponges are accounted for.

These are but a few of the liabilities that confront a doctor. They reveal the need for extreme care in these days when suits are started to secure easy money.

Do not lapse in your membership. You know not when you will be called to defend yourself.

MISUSE OF THE WORD "DRUG"

Attention has recently been called to the indiscriminate use of the words "drug," "narcotic" and "dope." As defined in the National Food and Drugs Act, a drug is an article used for the purpose of curing, mitigating, or preventing disease in man or other animal.

Physicians as well as newspaper writers have incorrectly referred to the "drug addict" or "drug fiend" when reference was intended to the use of some narcotic usually referred to as "dope." The members of the pharmaceutical profession do not object to the publication of the misdeeds or misdemeanors of "dope peddlers" or "dope addicts" but to describe them as "drug peddlers" or "drug addicts" does an injury. Physicians, therefore, are requested to discontinue the use of the word "drug" where the word "dope" or "narcotic" should be employed. Assurance has been given

by editors of newspapers the subject will have their serious consideration.

The practice is widespread in medical and pharmaceutical literature. Nearly everyone having to do with such publications has been guilty of misuse of the word "drug," even those of us who seek a discontinuance of the abuse.

The request is reasonable. The co-operation of all physicians will be of material aid in correcting an objectionable practice.

HEART DISEASE DEATHS

For the past several years there has been especial interest in heart disease because of the increase in the number of deaths. In Kansas in 1912, the first year for which complete statistics are available, the death rate was 89.1 per 100,000 population; in 1931, it was 141.0. The high rate for any year, 157.5, was recorded in 1928.

Authorities contend that the majority of cases of heart disease are preventable. Theoretically, this may be true. To properly solve such a problem it is necessary to make a careful study of a large number of subjects over a long period of years. Such studies as have been made, however, are very limited and are not sufficient to provide an answer to the question.

During the past three years there was a slight decrease in the number of deaths from the year 1928. Succeeding years will be watched with interest. Armstrong* states the heart disease picture is made up of three principal elements:

"First, it includes children and young adults under 45, where deaths from heart disease are a tragedy and a disaster. Perhaps in most cases, the etiological factors here are the acute infections resulting in heart tissue injury. Prevention largely involves the control of these infections. The incidence of these infec-

*Amer. Jour. of Pub. Health, March, 1932.

tions, such as diphtheria, scarlet, typhoid, and acute rheumatic fevers, is markedly decreasing, a factor that may be related to another significant observation, the recent very definite decline in heart fatalities at these ages. This, the most important age group sector in the heart disease range, presents a trend that is not only alarming, but decidedly reassuring and encouraging.

"Second, the heart disease picture also includes the age group from 45 to 65 or 70, where deaths from heart disease are certainly unfortunate. It is thought that they result partly from acute infective injuries, but more from syphilis. Prevention means mainly the control of syphilitic infection, and particularly the prevention of the advanced stages of syphilis by detection and adequate treatment. Is it possible materially to affect heart disease mortality in this middle age group by these control measures as well as by personal hygiene, the periodic health examination, or the practice of physiological thrift? That seems probable, so that here, too, as well as in the younger age group, the picture is not discouraging.

"Third, the heart disease picture includes, of course, the senescent, old-age, degenerative type occurring usually beyond 65 or 70. Deaths from heart disease in this age group are increasing, and are inevitably bound to increase as the population ages, and as larger groups survive to invade this age period. Heart failure is an inevitable incident in this age group. On the other hand, here it certainly is not a tragedy as it is among young adults, nor the unfortunate factor it is in the middle age population element. In fact, it is almost a natural process, and in a great many cases, a benign, beneficent process, furnishing an easy and painless as well as an unpro-

tected termination of life.

"From the point of view of health facts, it is important to distinguish between these 3 elements. To present the general combined death rate from heart disease as an increasing and inevitable menace is obviously misleading and unduly discouraging. The increasing rate is real, but is neither altogether deplorable nor alarming. Furthermore, it is certainly in part the inevitable and desirable *sequitur* of disease prevention and life prolongation in the earlier age groups. This is a case where analysis and appraisal are essential to the presentation of a true picture for public view, and indeed for constructive, hopeful action."

EDITORIAL COMMENT

One medical college last year received 2,043 applications for admission to the freshman class. Of this number, 120 were accepted.

The Journal will publish reports of interesting cases if members will forward such reports. The report should not exceed 450 words; preferably approximately 300 words.

The high tuberculosis mortality in Norway in the opinion of Dahl lies in the absence of bovine tuberculosis and the consequent lack of mild immunizing infection in childhood. (*Jour. A.M.A.*, Nov. 12, 1932.)

E. R. Squibb and Sons have announced a series of broadcasts over NBC, the first being given on January 8. The broadcasts may be heard over WDAF, Kansas City, or WOW, Omaha, at 3:30 p. m. Sunday afternoons.

The Sedgwick Memorial Medal for distinguished service in public health has been awarded to William H. Park, M.D., Director of Laboratories of the Depart-

ment of Health of New York City for the past 39 years.

The most desirable method of vaccination against smallpox is by use of the multiple pressure method. Dressings are never necessary when this method is used. Shields should never be used, regardless of the type of vaccination.

The American Board of Obstetrics and Gynecology will hold the next written examination and review of cases on April 1, 1933, in cities where there are Diplomats who may be empowered to conduct the examination. The next general, clinical examination will be held in Milwaukee on June 13, 1933.

Two recent decisions of the Iowa Supreme Court are of outstanding importance to the medical profession: (1) Proof of performing an illegal operation may be the basis for depriving a physician of his license, and (2) Osteopaths may not prescribe medicine to be taken internally. (*Jour. I.S.M.S.*, January, 1933.)

The tuberculosis and health society of Detroit and Wayne counties, Michigan, over a period of two and one-half years, examined for tuberculosis more than 3,500 children between the ages of five and nineteen years. Of this number, 24.5 per cent gave a positive von Pirquet test. Of those who gave a positive reaction, 5.5 per cent were diagnosed as tuberculous by the *x*-ray.

Student nurses spent more than two-thirds of their day doing maid and orderly work in some of the ten eastern hospitals recently studied by a representative of the National League of Nursing Education. Sixty-seven per cent of the students' time on the ward in a ten-hour day was given over not to nursing care but to work that under usual

circumstances would fall within the housekeeping category.

Meyer finds the application of a three per cent alcoholic solution of methyl violet effective in the disinfection of diphtheria carriers. The solution is applied to the tonsils and to the nasal mucous membrane by means of a cotton compress. The application is made two or three times a week and sterilization is obtained generally in seven or eight days. (*Medizinische Klinik, Berlin*, abst. in *Jour. A.M.A.*, Jan. 21, 1933. p. 230.)

The beating of a new born baby's heart constitutes life even though the baby never breathes, the Nebraska supreme court has recently ruled in the case of *Stuertz vs. Stuertz* in settling a controversy over the estate of Richard Stuertz, who was killed by falling down an elevator shaft in 1929. The baby after birth at no time voluntarily breathed. It made no sound and moved no muscle, but the heart tones were heard for 20 or 30 minutes in response to artificial respiration. The trial court had held the baby had been born alive because of the heart beats. (*Nebr. S.M. Jour.*, January, 1933.)

Death certificates provide the most valuable source of information for mortality statistics. Any conclusions reached from the analyses of these data, however, depend upon the accuracy with which the original information is supplied. In addition, correct and complete certification is necessary for the use of the death certificate by the individual for collecting insurance, probating wills, settling court cases, or transferring the title to property and remarriage. The responsibility for reporting the correct medical data, including the date of death, rests upon the physician.

PROPOSED LEGISLATION

An attempt will be made to summarize proposed laws of interest to the profession, introduced in the 1933 session of the legislature. Copies of laws in which members are especially interested may be secured by writing the Journal office, or your senator or representative.

The bills listed below are those introduced in both houses to February 2.

S. 52.—Senator Todd. An act concerning crippled children. (Defines crippled child, eliminates treatment of "chronic maladies"; provides unexpended monies shall remain in crippled children's fund and tax levy for ensuing year shall be reduced by the per cent which unexpended portion is of the total sum produced by the levy of one-tenth mill). On General Orders, recommendation be passed, February 3.

S. 174.—Senator Krouse (by request). An act relating to public hospitals. (Provides admission of any physician or surgeon licensed by the board of medical registration and examination to every hospital exempt from taxation or which is supported in whole or in part by public contribution or donations, and therefore declared to be a public hospital). In Committee on Public Health, February 3.

S. 181.—Senator Ralston. An act concerning the care and treatment of crippled children. (Provides that all persons or corporations desiring to supply services under the provisions of the act shall file application, their prices and qualifications. Commission authorized to approve or disapprove. Hospital shall not be approved unless it has at least one specialist in line of practice for which such hospital is selected and meets standards of American College of Surgeons. That the approval of any hospital shall not be revoked or such hospital removed from approved list except for substantial cause based upon failure to comply with laws then in force. . . after a hearing. After performance of operation, physician or surgeon shall see patient as often as in his judgment is necessary; may

designate another member of staff to see patient when in opinion of attending physician it is not necessary for him to personally see such child. Commission not to discriminate against any otherwise approved hospital because physician or surgeon in charge of any such child does not personally see such child daily or at any other stated time). In Committee on Public Health, February 3.

S. 195.—Senator Rexroad (by request). An act relating to hospitalization and medical aid for the poor and authorizing board of county commissioners in counties of less than 15,000 to levy a tax therefore. (Provides levy of tax not to exceed two-tenths of a mill for the purpose of aiding in the support of a public or county hospital owned or controlled by such county). In Committee on Assessment and Taxation, February 3.

S. 213.—Senator McDonald. An act relating to the recording of certificates of dentists and dental surgeons. . . in counties of more than 130,000 population. (Provides dentists shall register certificates annually with the county clerk; fee \$10.00. Fees to be used for establishing and maintaining a library of dental science and surgery in the county court house). In Committee on Public Health, February 3.

H. 3.—Mr. Blood. An act concerning crippled children. (Defines a crippled child; amending 1931 law, and limits treatment only to orthopedic defects). On general orders, February 3.

H. 6.—Mr. Blood. An act relating to drugs. (Prohibits planting, cultivation, selling. . . possession of peyote, mescal button, Cannabis indica—commonly known as Indian hemp—marihuana, or any compound or derivative. Conviction carries fine of \$1,000 and one to five years imprisonment, or both fine and imprisonment). Passed the House on January 20. In Senate Committee on Judiciary, February 3.

H. 46.—Mr. Higgins. An act relating to schools and providing for first-aid kits. (Every school board and governing body of every private or parochial school

provide a standard first-aid kit in every school in the state). Committee on Education on January 18, recommended the bill be not passed.

H. 74.—Mr. Brown. An act relating to free dental inspection in public schools. (Provides for repeal of law adopted in 1923 relating to free dental inspection in public schools). In Committee on Education, February 3.

H. 110.—Mr. Branden (by request). Companion bill to S. 195. In Committee on State Affairs, February 3.

H. 111.—Mr. Branden (by request). An act relating to securing hospitalization aid and medical attention for the poor in cities of the second class with less than 4,000 population. (Provides levy not to exceed five-tenths mill for the purpose of raising a poor hospitalization fund to be used by city to aid the poor, residents of said city, in securing necessary hospital aid and medical attention). In Committee of Cities of the Second Class, February 3.

H. 137.—Mr. Davidson. An act providing for the consolidation of county coroner and county health officer in certain counties. (In counties with a population of more than 110,000 and an assessed calculation of tangible property in excess of \$170,000,000, county coroner shall not be elected and duties of coroner shall be performed by the county physician). Committee on State Affairs recommended bill be not passed, February 3.

H. 153.—Mr. Manaugh. An act relating to local health officers. (Provides local health officers shall not make sanitary inspections of school buildings or grounds or inspection of the public health of the students except upon request of the local school board). In Committee on Hygiene and Public Health, February 3.

H. 181.—Mr. Hall. An act relating to crippled children. (Amends present law not to provide for treatment of chronic maladies. County commissioners empowered to decide if person applying for aid is indigent and entitled to benefits of act and also authorizes commissioners to enter into contracts with hospitals lo-

cated in the county, or if no hospital in county then with properly equipped hospital located within the state). In Committee on State Affairs, February 3.

H. 198.—Mr. Blood. An act relating to the registration of nurses. (Provides for annual registration at a fee of \$1.00; four years of high school education or its equivalent, and 450 hours of theoretical instruction). In Committee on Hygiene and Public Health, February 3.

H. 295.—Committee on Education. An act relating to free dental inspection in the public schools. (Provides board of education and district boards may provide for dental inspection). On General Orders, February 3.

—R—

BiSoDol Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that BiSoDol (BiSoDol Company, New Haven, Conn.) is offered to physicians for use in "The Early Treatment of Colds" and in the treatment of "colds, rheumatism, cyclic vomiting and other conditions associated with an acidotic symptom." The Council on Pharmacy and Chemistry found BiSoDol unacceptable for New and Nonofficial Remedies because it is an unscientific mixture of indefinite composition, offered to physicians with extravagant and unwarranted therapeutic claims under a name which is not descriptive of its composition. The Council endorsed the conclusions of the Council on Dental Therapeutics of the American Dental Association (J. Am. Dent. A. 19:1427, (Aug.) 1932). According to this report, BiSoDol is stated on the principal container to offer "A rational and effective method of re-establishing the normal alkalinity of the body without danger of systemic disturbance;" no statement of composition other than "The presence of Malt Diastase and Carica Papaya Compound makes it valuable in digestive disturbances," appears on the container; and in the advertising issued to dentists, it is stated to be "composed of Sodium Bicarbonate and Magnesium Carbonate, Bismuth Subnitrate, the amylolytic enzyme, Diastase, the proteolytic enzyme, Papain, and Oil of Peppermint." According to the chemist's report (of the Bureau of Chemistry of the American Dental Association), BiSoDol is essentially three parts of magnesium carbonate and four parts of baking soda to which a little oil of peppermint has been added. The amount of bismuth subnitrate in a single dose, approximately one-fifteenth of the average daily dose, is so small that for all practical purposes it might as well be omitted. (Jour. A.M.A., October 29, 1932, p. 1511).

Mellin's Food (Mellin's Food Company of North America, Boston).—A dried extract produced by an infusion of wheat flour, wheat bran and malted barley admixed with potassium bicarbonate; essentially maltose, dextrins, proteins and mineral salts for the modification of milk for infants and invalids.

M. D. Co. Powdered Malt Extract for Milk (Malt-Diastase Company, Brooklyn).—Spray dried powdered malt extract, diastatically active; contains vitamins B and G. It is claimed to be especially intended for admixture with milk for use in the diet of invalids, convalescents, children, nursing mothers and the aged.

THE LABORATORY

Edited by

J. L. LATTIMORE, M.D., Topeka

THE DIFFERENTIAL BLOOD COUNT—THE
SCHILLING COUNT

Many inquiries have been received during the past few months in regard to the Schilling count which also must involve the ordinary routine differential count. In this discussion, I shall not include discussion of the red count or the total leukocyte count.

The blood count: the differential slides should be collected in the morning before breakfast if absolute accuracy is desired, as we are not confused with the normal leukocytosis due to food and to the leukocyte wave.

After cleansing the finger in the usual way with alcohol, the finger is pricked with a sharp knife so that the blood will flow; more than moderate pressure will not be required. If excessive pressure is made on the finger, an excess of body fluids will be mixed with the blood. Some workers use fixation of the slides, either with methyl alcohol or acetone and methyl alcohol and the stain for these smears is the Giemsa stain. (Holborn formerly Gruebler). For unfixed smears we have found the most practical and best is Wright's stain. Our practice is to put about 8 drops of the stain on the slide, and at the end of about three minutes add 6 drops of distilled water and wash off at the end of one minute. To test if the water is satisfactory, mix 5 cc. of the water with a few grains of hematoxylin; after one minute (at the earliest) and before 5 minutes, there should be a distinct violet blue color appear.

In routine work our classification of the white cells should be (a) lymphocytes, from lymphoid tissue (b) monocytes, from the reticulo-endothelial system and (c) granulocytes, from the bone marrow and usually termed polymorphonuclears, eosinophiles and basophiles.

Differential figures are only of relative value so far as the proportion of granulocytes to lymphocytes and mono-

cytes. This relative proportion to one another is probably more dependable than the total count, it being an expression of existing mutual dependence of the different types. Certainly, the blood count either total or differential, must be considered as one phase of the case in making the diagnosis and except in rare cases must not be the last and final test. The total white count should be interpreted more in the light of the individual's resistance, while the increase in the granulocytes to be considered as the degree of infection from pyogenic organisms.

Interpreting the findings from a differential slide: lymphocytosis is common to convalescence from acute coccus infections, some bacillary infections, syphilis, measles, whooping cough, chronic infections, decreased resistance, lymphatic leukemia and a relative increase in agranulopenia (but total decrease). Monocytosis is found in typhoid fever, Hodgkins disease, protozoan diseases and acute infectious mononucleosis. Increase in polymorphonuclear neutrophils is found in acute infections, particularly in those due to cocci, and the loss of blood. Eosinophilia is commonly associated with parasitic diseases, bronchial asthma, scarlet fever, and convalescence from acute infections, especially cocci and eosinophilic leukemia (myelogenous).

Schilling has given a simplified technique and very excellent work on the differential blood count which presents a very practical use. His classification is based upon the division of metamyelocytes into two forms: (a) young forms with round or slightly indented nucleus, and (b) band forms with a deeply indented nucleus. Metamyelocytes are the connecting link between the myelocytes of the bone marrow and the polymorphonuclear neutrophils of the circulating blood. Myeloblasts are the parent cells of the myelocytes. With this classification and count, increase or decrease in lymphocytes or other cells will influence the results.

In normal circulating blood, the band form is the youngest mature type; is classified usually as a transitional and

is present in the proportion of 1 to every 15 or more mature segmented neutrophils.

To understand Schilling's theory one must think in the terms of degeneration and regeneration of leukocytes. The "peripheral" degeneration results in destruction of the cell, leading to a total decrease; further this injury may extend to the hematopoietic organs, the cells being either injured or at least the regeneration is disturbed. Through stimulation of these hematopoietic organs, due to peripheral destruction we have rejuvenation of the cells and in certain cases a pathological liberation of whole groups of immature cells.

For practical purposes the Schilling count may be considered as determining the relative proportion of immature and mature polymorphonuclear neutrophils. The transition of the neutrophils is about as follows: the parent cells is the myeloblast, then the myelocyte, juvenile form, the stab (transitional) and the mature polymorphonuclear neutrophil.

To visualize the count, we should draw a perpendicular line and on the right side of this line we place the segmented neutrophils and the stabs; on the left side, the myelocytes and juvenile forms. Normally, there are no cells of the immature type in the blood; however, when these do occur in more than just a few, we refer to the condition as a shift to the left. A sudden shift to the left is considered to be very grave, especially when the immature forms reach as high as 25 to 30 per cent. Repeated, almost daily counts must be made to follow the case, to determine if the shift to the left is increasing.

In this count there are other influencing powers, at times, such as the degenerative shift, lymphocytosis and monocytosis, causing some trouble in interpreting the count. However, the Schilling count is a most dependable test and offers much both in diagnosis and prognosis.

RECENT MEDICAL LITERATURE

Edited by
WILLIAM C. MENNINGER, M.D., Topeka

SEDIMENTATION TEST

Shattenberg in summarizing says that a standard technic for the performance of the sedimentation test should be accepted. He feels the method of Cutler is the most applicable, since it gives one the benefit of the first hour's readings, which are the most important at ten minute intervals. The Cutler method calls for a small tube 5 mm. in diameter and marked in millimeters, beginning with 0 at the 1 cc. level and ending with 50 mm. at the bottom. One-tenth cubic centimeter of 3 per cent sodium citrate is first drawn into a hypodermic syringe to act as an anticoagulant; then 1 cc. of the patient's blood is drawn into the syringe. In order to facilitate the mixing of citrate and blood, a small bubble of air is drawn into the syringe. The syringe content is then emptied into a Cutler tube. A normal sedimentation rate with but few exceptions rules out the presence of disease. Since there is a physiologic increase in fibrinogen during menstruation and pregnancy, one naturally expects a rapid sedimentation of red blood cells to occur. The sedimentation test is useful in the differential diagnosis of gynecologic conditions and also in determining the proper time for nonurgent elective operations, in pronosticating postoperative complications after the first week and as a criterion for discharging patients. In active tuberculosis, the sedimentation rate is always rapid, regardless of physical findings. In health departments, it assists in the diagnosis of obscure diseases that should otherwise escape detection.

Sedimentation Test as a Routine Laboratory Procedure: Observations of Eleven Hundred Persons; Schattenberg, Herbert J.: Archives of Internal Medicine, 50:569-574, October, 1932.

SYPHILIS AND THYROID DISEASE

Doctor Netherton, a dermatologist of the Cleveland Clinic, has very ably presented the literature on the association of syphilis and thyroid disease, reviewing some 62 cases in which syphilis and thyroid disease were associated. He reports

a case of probable gumma of the thyroid and many cases are cited in which syphilis produced a symptom complex which simulated that of hyperthyroidism. He concludes that anti-syphilitic treatment should not replace surgical intervention in case of active hyperthyroidism in syphilitic individuals, an operation followed by anti-syphilitic therapy preventing cardiac damage which may result from unnecessary delay. He does not find syphilis interfering with convalescence in any of these cases. He thinks pre-operative treatment is advisable but should not be too intensive. Many patients show the symptoms of hyperthyroidism with a complication of neurosyphilis and these cases are poor surgical risks, especially if there is a mental deterioration.

Syphilis and Thyroid Disease, With Special Reference to Hyperthyroidism. Netherton, E. W. American Journal of Syphilis. Vol. 16:479-510. October, 1932.

PERICARDIAL EFFUSION

Doctors Camp and White of the Massachusetts General Hospital make a very extensive study of pericardial effusion based on a large series of autopsies and on a group of cases in which fluid was obtained antemortem by pericardial paracentesis. They study this group of cases as to the type of effusion, the signs, the radiographic examination, the electrocardiograms, and the clinical diagnosis. The predominant etiological factor was an infection of some types. Pain was present in about one-fifth of the cases; dyspnea in half, a friction rub in less than ten per cent. In their conclusion they believe that without the presence of an acute fibrinous pericarditis the diagnosis of pericardial fluid is likely to be missed unless the effusion amounts to over 500 cc.

Pericardial Effusion: A Clinical Study. Camp, Paul D., and White, Paul D. American Journal of Medical Sciences, Vol. 184: 782-798. December, 1932.

TREATMENT OF PERNICIOUS ANEMIA WITH GASTRIC JUICE

The writers of this article experiment with the injection intravenously and intramuscularly of gastric juice which they found had to concentrate in a vacuum, and neutralize, before injection. Intra-

venous injection produced very marked systemic effect, but at the time the article was written 62 intramuscular injections of gastric juice had been given in amounts varying from 5 cc. to 25 cc. With these there was usually pain, quite frequently a temperature elevation even as high as 104, occasional chill and not infrequently marked flushing of the face and hands. They found a very remarkable hematopoietic response in cases of pernicious anemia and believe it is due to an anti-anemic substance present in gastric juice which they have found is thermolabile, dialysable and exhaustible which is probably a hormone and for which they suggest the name Addisin. They have found it very efficacious therapeutically in pernicious anemia.

The Hematopoietic Response in Pernicious Anemia Following the Intramuscular Injection of Gastric Juice. Morris, Roger S., Schiff, Leon; Burger, George; Sherman, James E. American Journal of Sciences. Vol. 184:778-782. December, 1932.

ACHLORHYDRIA

This report comprises a review of 210 cases of achlorhydria occurring in patients with gastrointestinal complaints. Achlorhydria is more frequent in females and its incidence increases with age up to the seventh decade. No essential difference was found in the age incidence of true achylia and of achlorhydria. The significance and incidence of various diseases and symptoms which are commonly thought to be associated with achlorhydria are discussed. In 15 cases of *primary anemia* all had a true achylia; no return of acid after specific therapy was noted in the report. *Gastritis* was noted in 19.5 per cent of the cases of achlorhydria. *Carcinoma of the stomach* was found in 16 cases. *Gastrogenous diarrhea* occurred in 10 per cent of patients. *Constipation* was a major complaint in 34 per cent of cases. *Rapid stomach emptying* was present in 41 per cent of cases of achlorhydria and was decidedly more common in true achylia. The incidence of foci of infection and the importance of their ablation in cases of achlorhydria is stressed.

Achlorhydria With a Review of 210 Cases in Patients With Gastrointestinal Complaints. Bockus, H. L., Bank, J., and Willard, J. H.: The American Journal of the Medical Sciences, 184:185-202, August, 1932.

THE PHYSICIAN'S LIBRARY

ANATOMY OF THE BRAIN AND SPINAL CORD.
William W. Looney, M.D., Professor of Anatomy,
Baylor University College of Medicine, Dallas, Texas.
F. A. Davis Company, Philadelphia. Price \$4.50, net.

Doctor Looney has prepared a well organized, simple descriptive anatomy of the brain and spinal cord. His book contains 370 pages of well organized material, beginning with the development, histogenesis, the microscopic structure, then the gross anatomy of the brain and cord, all of which is correlated with function. The book is complete with a chapter on the sympathetic nervous system and also a chapter on the practical consideration outlining some case histories and the correlation between the clinical picture and the anatomical lesion. The book contains 153 illustrations.

The subject matter is well presented; it is brief and concise, using entirely the approved nomenclature. The reader who may be familiar with the older terms may at first be a little at a loss because of the absence of the old, confusing terms like Gower's tract and other familiar names of Gall, Lissauer. There is a delightful absence of many of the controversial issues.—W.C.M.

THE SURGICAL CLINICS OF NORTH AMERICA.
(Issued serially, one number every other month.)
Volume 12, No. 6. Index Number. (Philadelphia Number December 1932.) 280 pages with 110 illustrations. Per clinic year (February 1932 to December 1932). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1932.

Twenty-two of Philadelphia's leading surgeons contribute to this number, which is filled with many instructive and general surgical discussions. Dr. Charles F. Nason in presenting a case of traumatic diaphragmatic hernia suggests the intra-thoracic approach for repair rather than by the intra-abdominal route. Drs. John B. Carnett and William Bates give a most thorough discussion of the so-called railway spine, emphasizing the importance of early x-ray in traumatic injuries to the spine and the frequent finding of compression fractures resulting from relatively mild violence.

Dr. Eldridge L. Eliason brings out some valuable points in the handling of

cases of gastro-intestinal hemorrhage. Doctors D. B. Pfeiffer and J. Montgomery Deaver present a variety of cases of carcinoma of the colon and rectum and their treatment of these.

Dr. Thomas J. Ryan and Dr. Frank B. Block discuss acute intestinal obstruction. In one of Dr. Block's cases the recovered gastric contents obtained through the duodenal tube was reinjected into the rectum with miraculous results.

Some instructive clinics on fractures are given by Doctors A. Bruce Gill, Hubley R. Owen and Adolph A. Walkling.

Infections in the dangerous circle of the face are discussed by Dr. V. W. Murray Wright. Dr. Edward T. Crossan contributes a very good article on surgical drainage.

There are other very instructive discussions and clinics in this number which also includes the index for volume 12.—M.B.M.

CORRECTION OF DEFECTIVE SPEECH, by Edwin Burket Twitmyer, Ph.D., and Yale, Samuel Nathanson, Ph.D., The University of Pennsylvania. P. Blakiston's Son & Co., Philadelphia, 1932. 413 pages. Price \$3.50.

This whole problem of the correction of defective speech is somewhat jumbled at present—jumbled because every new worker in this field gets up a system of his own and bases it on theories more or less individualistic of its originator. The writers of this book are very well known, particularly Doctor Twitmyer. In general their book is made up of corrective material and the technique for using it in a series of lessons; it is done in excellent fashion. They assume, however, that it can be applied to any situation in which there is defective speech, perhaps with the single exception of feeble-mindedness. They do not discuss the psychological situations which may be operative in retarding speech; nor do they indicate much interest in the psychological inhibitions of speech. They vaguely refer to the psycho-physiological approach.

The book is probably most valuable to those who have occasion to teach themselves or others corrective speech. The authors give some very sound advice and blow up some rather old age theories. In answer to the idea that some children will outgrow their speech disorders, the

authors state that the only things normal children outgrow are shoes and clothes. They believe that the opportune time for speech correction begins about the seventh year and that such work should be attempted only by one technically trained. They call attention to the fact that it apparently is not generally known that probably 90 per cent of children stammer during their third year of life. The book is excellent in its explanation of the technique, which after all is the chief purpose of the book.—W.C.M.

THE PRACTICAL MEDICAL SERIES. General Medicine. Edited by George H. Weaver, M.D., Lawrason Brown, M.D., George R. Minot, M.D., Sc. D., William B. Catle, M.D., William D. Stroud, M.D., and Ralph C. Brown, M.D., series 1932, 837 pages. The Year Book Publishers, Inc., Chicago. Price \$3.00.

Very few physicians have sufficient time to read the tremendous amount of literature written on medical subjects. Year books, therefore, provide an important adjunct to the library of the busy physician.

This year the Year Book Publishers have maintained the high standard of previous years in the volume on General Medicine. The volume contains summaries of large numbers of articles written by outstanding authorities in their respective fields, which together with editorial comments add materially to the value of the work. There is an index by subjects, as well as an index of authors. The paper is of excellent quality, and the type large so that it does not tire the eyes.—E.G.B.

THE HISTORY OF DERMATOLOGY, by Wm. Allen Pusey, A.M., M.D., LL.D., Professor of Dermatology Emeritus, University of Illinois; sometime President of the American Dermatological Association and of the American Medical Association. 223 pages and 33 illustrations. Charles C. Thomas, Springfield, Ill. Price \$3.00.

In the preface the author states there is no history of dermatology in English and he has undertaken in this volume to supply that lack. The story, of course, summarizes the subject but in sufficient fullness to include most of the significant details. It recites the history of dermatology from 300 B.C. to the present. The incorporation of an historical index, replete with factual data, adds greatly to the value of this source book.

Large type, heavy paper, beautifully printed and bound.—E.G.B.

COUNTY SOCIETY NEWS

CLAY COUNTY MEDICAL SOCIETY

A regular meeting of the Clay County Medical Society was held January 11 in Clay Center at the Nurses Home of the Municipal Hospital. Dr. Lawrence P. Engel addressed the society on "The Surgical Treatment of Goiter." Dr. Engel supplemented his discourse with demonstrations of specimens and illustrated his description of the operative technic with lantern slides. An informal discussion by members of the society followed.

W. H. ALGIE, M.D., Secretary.

FORD COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Ford County Medical Society was held at the Lora Lock Hotel in Dodge City, on December 13, 1932. Dinner was served at 6:00 p. m. to forty physicians from Dodge City and Southwest Kansas.

After dinner 28 nurses from St. Anthony Hospital and Southwest Kansas Nurses' Association joined the meeting. Dr. Frank Neff of Kansas City talked to us on "Chest Conditions in Children." Many interesting x-ray pictures and cases were discussed. It was one of the most interesting programs the society has held.

The meeting was dedicated to Dr. W. F. Pine, retiring secretary and treasurer of the society, who in the past fifteen years has devoted so much time to the society and to whom the society in a great measure owes its present flourishing condition. A handsome traveling bag was presented to Dr. Pine by the members.

Officers elected for 1933: Earol Wilson, Montezuma, president; Noble Melencamp, Dodge City, vice president, and C. L. Hooper, Dodge City, secretary-treasurer.

C. L. HOOPER, M.D., Secretary.

FRANKLIN COUNTY MEDICAL SOCIETY

The regular meeting of the Franklin County Medical Society was held at the North American Hotel, with Dr. John B. Davis presiding. The meeting was begun

with a banquet at 6:30 at which the dentists and nurses were invited guests. Forty-one were in attendance.

Following the dinner the society and guests were entertained by some of the "Brick" Peacock's musicians, Wallace Hutchins accompanied by Margaret Hutchins played two clarinet solos. Laura Gruver gave two violin solos and was accompanied at the piano by Mrs Fred Judd.

Dr. William C. Menninger of the Menninger Clinic in Topeka was the guest speaker. His address was on "Mental Health" and was something different from that which we are accustomed to hearing, and was heard with a great deal of interest. The address was discussed by Dr. F. A. Carmichael of the State Hospital at Osawatimie.

A short business session was held at which Doctors Edmond Wells, J. E. Wallen, and Robert R. Means were accepted as members of the Society.

President, John B. Davis; vice president, J. A. Dyer, and secretary-treasurer, J. F. Barr turned over the reins to next year's officers who are, J. A. Dyer, president; O. N. Clark, vice president, and L. V. Dawson, secretary-treasurer.

J. F. BARR, M.D., Secretary-Treasurer.

FRANKLIN COUNTY SOCIETY

The Franklin County Medical Society held its first meeting of the year January 25, 1933 at Ottawa in the staff room of Ransom Memorial Hospital with the newly elected officers in charge: John A. Dyer, M.D., president; O. N. Clark, M.D., of Lane, vice president; and Lerton V. Dawson, M.D., secretary-treasurer.

The Board of Trustees of the hospital provided a very excellent dinner complimentary to the society, and the personnel of the hospital served the dinner in a very commendable way.

After the reading of the minutes of the last regular meeting and the usual order of business was attended to a general discussion was had pertaining to the immunization of all school children and children of pre-school age in the county who have not been immunized. A committee was appointed to work out a plan

and bring it before the society at the February meeting.

Three papers were presented as follows:

"Group Practice, Its Advantages and Disadvantages"—J. F. Barr, M.D.

"Charity Patients, Living Distant from the County Health Officer"—O. N. Clark, M.D.

"Courtesy Practice; Who is Entitled to Same"—G. W. Davis, M.D.

These papers were well prepared, were very interesting and were extensively discussed by members present. No definite conclusions being made, however.

An unusual interest was manifested in the meeting. A good spirit was evident. Twenty-five members and one visitor attended and more than half our membership "kicked in" with their dues for 1933. Adjournment at 10:00 p. m.

L. V. DAWSON, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, the evening of January 2, 1933. President Marvin Hall presided.

Dr. H. W. Powers and Dr. Byron J. Ashley were elected to membership.

Dr. Henry M. Benning presented an interesting discussion on "The Clinical Significance of Acidosis and of Alkalosis." Dr. Benning stated the purpose of his paper was to discuss some of the chemical aspects of pathological body states from the viewpoint of related changes in the hydrogen ion concentration; that is, disease correlated with the acidity of alkalinity of the tissue.

EARLE G. BROWN, M.D., Secretary.

SUMNER COUNTY MEDICAL SOCIETY

The Sumner County Medical Society met in regular session at the Roadside Barbaque in Wellington on January 19, 1933. The members and visitors enjoyed dinner at 6:30 p. m., following which there was a short business session. The program consisted of: President's Address—Dr. J. F. McDonnell, Caldwell. Light Through the Various Spectra, with special reference to the combined application of x-Ray, and Radium to Cervical

Carcinoma—Dr. Opie W. Swope, Wichita, Kansas.

Both addresses were excellent and the program thoroughly enjoyed by all present.

R. M. PRICE, M.D., Secretary.

R

COUNCIL MEETING

(Continued from Page 66)

crease the expense of the state society.

(3) Because of economic conditions, it is not wise to consider any increase in expense in the state society at this time. Therefore, it is unwise to give the proposition any consideration at this time.

(4) As a choice between a medical or lay secretary, I am convinced that it should be a medical man.

Dr. Stephenson did not send in a written opinion but at our meeting last October, said that he was not in favor of any action that would increase our state society dues at this time, but that if this plan could be put in operation without increase in dues, he would favor it.

Dr. Miller says that he is strongly in favor of a full-time secretary but does not believe, under present economic conditions, that this is the time to start it.

Dr. Miller states, "I do not believe we can properly support a full-time secretary with our present dues. I know that any raise in dues to cover added expense, will mean a loss in membership and I believe that this will apply for one to two years to come. I favor a medical man as full-time secretary if a man can be secured. If not, I then prefer a newspaper man."

Dr. Chambers, the youngest member of the committee, is enthusiastically in favor of the full-time secretary plan, even if it does increase the dues. He says he believes a big point in favor of the full-time secretary is for unity of effort in advancement of the Society. He is in favor of a newspaper man rather than an M.D.

I wish to report for myself that soon after this committee was appointed, I prepared a questionnaire which I sent to the president and full-time secretary of such states that I knew were employing a full-time man.

I received answers from each man we

sent these questionnaires to and in each instance the report was favorable to this plan. The state society dues, as reported in these seven states were the lowest in Ohio, which were \$6.00; highest in Wisconsin, \$17.00; Colorado, West Virginia and Iowa each \$10.00; Minnesota \$15.00; Indiana \$7.00. These fees included medical defense, Journal, etc., and I understand same privileges as our state dues give our membership.

Judging from what I have been able to learn and observe, I feel that it would be advantageous for our state society to adopt this plan at the earliest practical time. I also believe that it would not be best to materially increase our society expense at this time. One or two dollars per member might not be objected to if we get big value in return.

I believe if the Council would make a careful readjustment of its state's financial budget, this plan could be put in operation without an increase in dues. I would favor the secretary to be the managing editor of the Journal, assisted in the editorial work by the membership of the Council and such other physicians as they may select. I am inclined to believe that a lay secretary would be preferable to a medical man, as an efficient layman can be employed for much less than an equally efficient medical man and probably could contact the public, especially the legislation better than a physician. Whether medical or laity does not make so much difference. The big idea would be to select the right man for the job.

You will observe from the foregoing that the entire committee is in sympathy of the full-time secretary plan. In details they have expressed varying opinions. Any definite change in plan must have the enthusiastic, hearty co-operation and support of the officers and Council of the state society to accomplish the desired results.

Respectfully,

J. F. GSELL, Chairman.

The report was discussed and on motion regularly made, seconded and carried the report was received and filed.

Dr. Earle G. Brown, editor of the Journal and Folks, made the following

reports:

REPORT OF THE EDITOR OF THE JOURNAL OF
THE KANSAS MEDICAL SOCIETY—
JANUARY, 1933

A comparative statement of expenditures for the years 1931 and 1932 is attached. According to this statement the Journal is better financially than one would have anticipated at the beginning of 1932. Expenditures for 1932 have been \$450.07 less. The items of printing, stock, postage, electrotypes and rent are all less for 1932. Postage would have been even less than it is, but we must now pay two cents for each notification of change of address. Salaries for 1932 are \$130.00 more because of additional office help required and a different prorating of salaries. Telephone and telegraph item is \$45.14 more—we had no office telephone prior to Dr. McVey's death. It was necessary to purchase new equipment, an adding machine and typewriter, which amounted to \$126.50. The item of \$13.74 for delivering Journals in the city of Topeka reduced our postage bill \$21.34. Miscellaneous office expenses are \$15.59 less than in 1931.

Advertising receipts for 1932 are \$870.96 less than in 1931. Sales and subscriptions are \$6.18 more. In 1933 our subscriptions will be \$200.00 less, due to the fact the Tuberculosis Association will discontinue paying for 100 subscriptions for non-members, which they formerly subscribed for each year.

The entire make up of the Journal was changed in 1932. A separate heading for original articles is now used, editorial headings have been changed and box headings for all other separate subjects make the appearance of the Journal much more attractive. New departments are listed under the following titles: *The President's Message*; *The Laboratory*, edited by J. L. Lattimore, M.D., Topeka; *Recent Medical Literature*, edited by William C. Menninger, M.D., Topeka, and *Truth About Medicine*. The title of the column formerly listed as "Books" has been changed to *The Physician's Library*.

There were 44 pages more of original reading material in the Journal for 1932 than in 1931. Sixty county Society re-

ports were made in 1932 and only 30 in 1931. Three more books were reviewed in 1931 than in 1932 and 12 more deaths reported in 1932 than in 1931. There were 19 more illustrations in the Journal for the year 1932 than in 1931. This would have ordinarily made our electrotype item much more but for the new policy adopted in September, 1932: "The cost of illustrations will be defrayed by the author," and having our electrotypes made at the engraving office in place of through the printer, made our statement for this item for 1932, \$26.92 less than in the previous year. Even though advertising receipts for 1932 were less, it might be interesting to note the Journal office was responsible for thirteen new professional card advertisements and 3½ pages of advertising, bringing a total amount of \$355.00.

If the Journal were owned by a private individual, and if the receipts and expenses calculated on the same basis as for any other publication of this kind, in which the regular subscriptions are made part of the receipts, the Journal made a net profit of \$532.63. It must be kept in mind the amount of \$2 per each member for subscription to the Journal is a legitimate part of its income and when the Society has paid to this office only approximately \$1.46 per member, it has saved the difference between \$1.46 and \$2.00 or 54c per member, or an amount of \$734.00.

Medical societies of all adjoining states have a higher subscription rate for their publications than Kansas: Nebraska \$2.50, Oklahoma \$4.00, Colorado \$2.50, Missouri \$3.00 and Iowa \$3.00.

*Financial Statement of the Journal of
the Kansas Medical Society*

Receipts and disbursements by the editor from January 1, 1932, to January 1, 1933:

RECEIPTS	
Journal advertising	\$3,658.77
Sales and subscription	302.69
Kansas Medical Society	2,000.00
Other sources	17.38
	<hr/>
Bal. on hand 1-1-32	\$5,978.84
Bills receivable	471.91
	<hr/>
	830.18
	<hr/>
	\$7,280.93
Deficit January 1, 1933.....	201.37
	<hr/>
	\$7,482.30

EXPENDITURES

Journal printing	\$2,086.55
Stock and stationery	719.71
Salaries and wages	2,967.00
Postage	136.25
Electrotypes	132.98
Rent	137.50
Drayage	8.50
Telephone	84.58
Office supplies and equipment	142.75
Delivering Journal in Topeka	13.74
Insurance	4.74
Supplement to A.M.A. Directory	5.00
Extra help for August Journal	2.00
Cash	4.36

\$6,445.66

Salary due Editor	850.00
Bills payable	186.64

\$7,482.30

*Actual Earnings of the Journal of the
Kansas Medical Society if paid \$2
per Member*

Receipts and disbursements from Jan-
uary 1, 1932, to January 1, 1933:

RECEIPTS

Journal advertising	\$3,658.77
Sales and subscriptions	302.69
Other sources	17.88
1,375 paid up members at \$2.00 per member	2,750.00

\$6,728.84

Bal. on hand 1-1-1932	471.91
Bills receivable	830.18

\$8,030.93

EXPENDITURES

Journal printing	\$2,086.55
Stock and stationery	719.71
Salaries and wages	2,967.00
Postage	136.25
Electrotypes	132.98
Rent	137.50
Drayage	8.50
Telephone	84.58
Office equipment and supplies	142.75
Delivering Journal in Topeka	13.74
Insurance	4.74
Supplement to A.M.A. Directory	5.00
Extra help for August Journal	2.00
Cash (See attached list)	4.36

\$6,445.66

Salary due editor	850.00
Bills payable	186.64

\$7,482.30

*Net amount earned by Journal from
January 1, 1932, to January 1, 1933, if
the normal income from subscriptions at
\$2.00 per member is calculated as part*

of the receipts instead of the amount
paid the editor\$548.63

*Financial Statement of the Bureau of
Public Relations, Kansas Medical Society*

Receipts and disbursements from Jan-
uary 1, 1932, to January 1, 1933:

RECEIPTS

Sales and subscriptions	\$ 935.35
Kansas Medical Society	2,000.00
Miscellaneous	5.67
Advertising	297.00

\$3,238.02

Balance on hand 5-1-32	80.10
Accounts receivable	129.85

\$3,447.97

EXPENDITURES

Printing "Folks"	\$1,357.40
Stock and stationery	201.80
Salaries and wages	931.75
Postage	146.56
Rent	100.00
Electrotypes	111.17
Drayage	2.50
Delivering "Folks" in Topeka	55.59
Stencils and ink	72.40
Stencil cabinet	42.50
Telephone wires and office supplies	16.69

\$3,038.36

Accounts payable	272.23
Balance January 1, 1933	137.38

\$3,447.97

The reports were approved and placed
on file.

A motion was regularly made, second-
ed and carried that the secretary draw a
warrant covering the deficit for the pub-
lications of Journal and Folks, made
payable to the Editor.

Dr. O. P. Davis presented the follow-
ing resolution:

RESOLVED by the Council of the Kansas
Medical Society that the members of our
society be urged to buy medicinals, in-
struments and other supplies from adver-
tisers in our Journal in preference to
similar articles sold by those who do not

INTELLIGENT INTERPRETATION of Your Prescriptions

Careful attention to detail, un-
most diligence in grinding lenses,
and a sincere desire to carry out
your wishes with exactitude,
mark Lancaster Service. You may
send us your prescriptions in

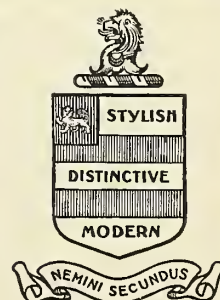
confidence, Doctor. A wide vari-
ety of stocks, intelligent, ex-
perienced workmen, and a "NO
DELAY" policy enable us to fill
them to your entire satisfaction.
May we send you our catalog?

LANCASTER OPTICAL COMPANY

An Exclusive Oculist Service

1114 Grand Avenue

Kansas City, Missouri



Lancaster

advertise, which was unanimously adopted, with the recommendation that the notice be printed in a conspicuous place in the Journal.

Dr. Earle G. Brown, was re-elected editor for the ensuing year and at his request the salary was reduced \$200.00.

The secretary's expense account since May 6 amounting to \$689.13 was allowed:

SUMMARY

Stenographer's salary	\$600.00
Stamps	60.00
Long distance calls, telegrams	7.60
Miscellaneous	21.53
	\$689.13

Meeting adjourned.

J. F. HASSIG, M.D., Secretary.

—R—

DEATH NOTICES

Bacon, Henry M., Scammon, aged 78, died December 28, 1932, at Mt. Carmel Hospital, Pittsburg, of chronic nephritis. He graduated from College of Physicians and Surgeons, Kansas City, in 1897. He was not a member of the Society.

Cook, William H., Beloit, aged 64, died November 28, 1932, of angina pectoris. He graduated from Rush Medical College, Chicago, in 1894. He was a member of the Society.

Finley, William H., Turner, aged 73, died at Bethany Hospital, Kansas City, December 17, 1932, of brain tumor. He graduated from College of Physicians and Surgeons, Kansas City, in 1898. He was not a member of the Society.

Graham, John Wesley, Wetmore, aged 87, died December 8, 1932, of angina pectoris. He graduated from Northwestern Medical College, St. Joseph, in 1882. He was not a member of the Society.

Hayes, Harvey L., Kansas City, aged 70, died December 20, 1932, of accidental burns. He graduated from Eclectic Medical University, Kansas City, in 1906. He was not a member of the Society.

Howe, Charlie Faley, Atchison, aged 72, died December 25, 1932, of duodenal ulcer. He graduated from Northwestern Medical College, St. Joseph, Missouri, in 1893. He was not a member of the So-

ciety.

Woodard, Joseph J., Olathe, aged 74, died December 28, 1932, of cerebral hemorrhage. He graduated from University Medical College, Kansas City, in 1899. He was a member of the Society.

Mahaffey, George Chester, aged 65, died January 9, 1933, of coronary occlusion. He graduated from University Medical College, Kansas City, Missouri, in 1896. He was not a member of the Society.

—R—

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of November 26 the following have been accepted:

Maltine Company, Maltine with Mineral Oil and Cascara Sagrada.

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Nostal.—Isopropyl bromallyl barbituric acid. It differs from barbitol (diethyl barbituric acid) in that both of the ethyl groups of the former have been replaced, one by an isopropyl group and the other by a substituted brominated allyl group. The actions and uses of Nostal are essentially similar to those of barbitol, but it is more active than barbitol and is used in correspondingly smaller doses. It is marketed in the form of tablets 0.1 Gm. (1½ grains). Riedel-de Haen, Inc., New York.

Abbott's A-B-D Malt Extract with Cod Liver Oil and Viosterol 5 D.—Malt Extract, 57 per cent; cod liver oil with sufficient viosterol to adjust the antirachitic potency to 5 D, 30 per cent by volume; glycerin, 10 per cent; alcohol, 3 per cent. The finished mixture is assayed for vitamin B₁ (F) potency by a modification of the method of Sherman and Spohn and is required to contain not less than 60 units per fluidounce; it is assayed for vitamin B₂ (G) by the method of Sherman modified by the diet proposed by Munsell and is required to contain not less than 60 units per fluidounce. The cod liver oil is assayed by the method of the U.S.P. X for vitamin A and is required to contain not less than 500 units per gram; it is adjusted by addition of viosterol to contain not less than 66.65 vitamin D units (Steenbock) per gram when assayed by the method of the Wisconsin Alumni Research Foundation. The actions and uses are the same as those for cod liver oil. Abbott Laboratories, North Chicago, Ill. (Jour. A.M.A., December 3, 1932, p. 1945).

Neocinchophen—Lederle.—A brand of neocinchophen—N.N.R. It is marketed in the form of tablets 5 grains. Lederle Laboratories, Inc., Pearl River, N. Y. (Jour. A.M.A., December 31, 1932, p. 2265).

The Scot Tissue Questionnaire.—The results of an investigation by the A.M.A. Chemical Laboratory and the Bureau of Investigation of the charges made

by the Scott Paper Company that two out of three toilet papers of 660 brands tested had been found unsafe and unfit to use, proved conclusively that there was no basis for any such charge. Now the medical profession is being circularized by one Henry Legler, who writes on stationery that carries no name but does have the address Room 1018, at 420 Lexington Avenue, New York City (which appears to be a storage room for the Scott Paper Company's advertising agency). In the combined letter and questionnaire that Legler sends to physicians, he states that he is "making a study of inferior toilet tissues and their relation to health for the Scott Paper Company" and inquires whether in their experience they have found that injury to mucous membranes may be caused by inferior toilet paper, what characteristics in the paper itself would be responsible for these troubles, and what qualities they consider most desirable in toilet tissue. Few physicians indeed have had experience enabling them to express a scientific opinion on either of the first two questions; the third question, of course, any physician could answer; so could any intelligent layman. (Jour. A.M.A., July 30, 1932, p. 393).

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Larabee's Best Flour (Bleached) (Larabee Milling Company, Kansas City, Mo., subsidiary of the Commander-Larabee Corporation, Minneapolis).—A patent hard winter wheat flour; bleached.

Maltine (Plain) (The Maltine Company, New York).—A concentrated extract of malted barley, wheat and oats, containing vitamins B and G, diastase, and 3.9 per cent added alcohol. It is claimed to be an easily digestible carbohydrate food for supplementing the diet in vitamins B and G; contains diastase for aiding the digestion of starch.

Mellin's Food Biscuits (Mellin's Food Company of North America, Boston).—Baked biscuits prepared from wheat flour, Mellin's Food (essentially maltose, dextrins, cereal protein and minerals and potassium bicarbonate), cane sugar, oleomargarine and sodium bicarbonate. Biscuits intended for children passing from an infant's diet to more substantial nutriment and for invalids.

Merck's Banana Powder (Northjohn Corporation, Lincoln, N. J., manufacturer; Merck & Co., Inc., Rahway, N. J., distributor).—Spray dried ripe bananas retaining enzymes and vitamins in accordance with the following approximations: vitamins A (100 per cent), B (100 per cent), C (20 per cent) and G (100 per cent). It is intended for table uses of bananas, the preparation of banana milk drinks, as a carbohydrate supplement for infant and invalid feeding, and as an adjunct in special diets.

Squibb Chocolate Flavored Vitavose (E. R. Squibb & Sons, New York).—A powdered mixture of sucrose, Vitavose (extract of malted wheat germ and U.S.P. malt), cocoa, skim milk and lactose; vanilla flavored; contains vitamins B and G. It is claimed to be intended especially for the carbohydrate, food iron and vitamins B and G supplement of milk. (Jour. A.M.A., December 17, 1932, p. 2113).

Grandview Sanitarium

KANSAS CITY, KANSAS (26th St. and Ridge Ave.)



A High Grade Sanitarium and Hospital of superior accommodations for the care of:

Nervous Diseases

Mild Psychoses

**The Drug Habit
and Inebriety.**

Situated on a 20-acre tract adjoining City Park of 100 acres. Room with private bath can be provided.

The City Park line of the Metropolitan Railway passes within one block of the Sanitarium. Management strictly ethical.

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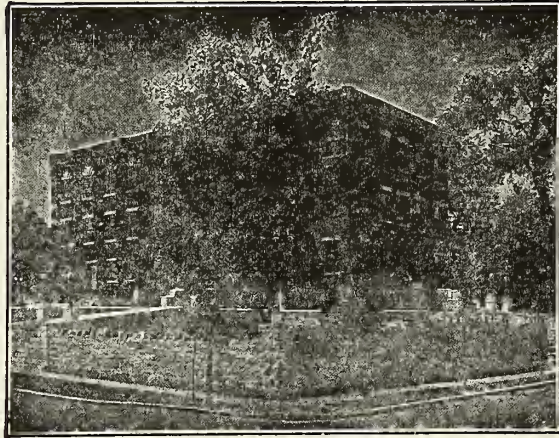
E. F. DeVILBISS, M.D., Supt.
OFFICE, 1124 PROFESSIONAL BLDG., KANSAS CITY, MO.

JAMES Y. SIMPSON, M.D.,
Neurologist and Addictologist

HERMON S. MAJOR, M.D.,
Neuro-Psychiatrist

SIMPSON-MAJOR SANITARIUM

3100 Euclid Avenue, Kansas City, Mo.



Nervous
Diseases.
Selected
Mental
Cases.
Alcohol
Drug and
Tobacco
Addictions

Electricity
Heat
Water
Light
Exercise
Massage
Rest
Diet
Medicine

Beautifully situated in a pleasant residence section of the city. Fully equipped and well heated. All pleasant outside rooms. Large lawn and open and closed porches for exercises. Experienced and humane attendants. Liberal, nourishing diet. Resident physician in attendance day and night.

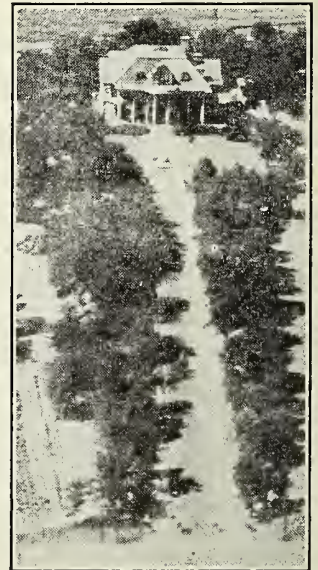
THE ROBINSON CLINIC

Head injuries pass through two stages—the acute, immediately following the trauma, and the chronic, during which period an attempt at readjustment of the nervous tissue is made, and sequelae, if any, develop.

At the time of the injury, the major efforts should be directed to prevent death, which occurs either from shock or the injury. The treatment during this phase is so well known that little need be said. There is one important thing: Every case should have a spinal puncture as early as possible, to determine the presence or absence of blood. In considering sequelae and the treatment thereof, as well as in medico-legal matters, the history of blood in the spinal fluid is very important.

Several weeks or possibly months after the injury, sequelae may develop. They are of two types—the functional and the organic. The organic may be one of three conditions or a combination of any—disturbed physiology, characterized by headache; dizziness, malaise and nervousness is the more common; epilepsy, or a psychosis, may develop.

The treatment of the organic sequelae is by an encephalogram, which breaks up the adhesions and thus allows the nervous system to function more normally. Occasionally, surgery must be resorted to, in order to remove a scar which is producing the symptoms.



Airplane View

—Courtesy Curtiss-Wright
Flying Service

Nervous and
Mental
Diseases

G. WILSE ROBINSON, M.D.
Medical Director
1432 Professional Bldg. 8100 Independence Road
Kansas City, Mo.

Drug and
Alcohol
Addiction

G. Wilse Robinson, Jr., M.D.
Assoc. Medical Director

Paul A. Johnson, M.D.
Internist

THE JOURNAL

of the

Kansas Medical Society

VOL. XXXIV

TOPEKA, KANSAS, MARCH, 1933

No. 3

ORIGINAL ARTICLES

UNDULANT FEVER WITH REPORT OF CASES OCCURRING IN KANSAS*

EARLE G. BROWN, M.D.

Topeka, Kansas

Undulant fever is a bacteremia or septicemia, characterized by three predominating symptoms: (1) general feeling of weakness, especially in the afternoon and accompanied by headache, or general aching; (2) temperature, which is usually preceded by chilliness, or a definite rigor followed by a hot stage, and (3) profuse sweating. Physicians and health officers, however, have only within recent years had their attention directed to the prevalence of this disease due to *Brucella melitensis* var. *abortus* and *Brucella melitensis* var. *suis*.

Many names have been applied to the disease we now recognize as undulant fever, although the term most generally applied to the infection until a few years ago was Malta fever. The term "undulant fever" was first proposed by Hughes in 1896, and is the designation generally used by English writers.

Hughes points out that Hippocrates described fevers which correspond to undulant fever infection and various writers between 1722 and 1800 gave evidence of having observed the disease. British medical officers, however, who served in Malta after 1800, repeatedly described its occurrence and increasing prevalence especially between the years 1854 and 1860. Marston, one of the medical officers stationed on the island for a period covering the Crimean wars, was the first to differentiate Malta fever from other fevers seen at Malta and other places on the Mediterranean coast. This disease was fully described in his "Report on Fever" for 1861 and design-

nated as Mediterranean remittent, or gastric remittent fever. The following extract is from the introductory paragraph of his report:

"By this is meant a fever characterized by the following symptoms and course; a preliminary stage of subacute dyspepsia, anorexia, nausea, headache, feeling of weakness, lassitude and inaptitude for exertion, mental or physical, chills, muscular pain, and lastly, a fever having a long course, three to five or ten weeks, marked by irregular exacerbations and remissions, great derangements of the assimilative organs, tenderness in the epigastric region, and splenic enlargement. It is prone to relapses, has a protracted convalescence, and is frequently marked by rheumatism."

Five years later, Chartres confirmed Hughes' observations:

"So mild were the symptoms in some of the cases that it became a matter of nice discrimination to distinguish the sick man from the mere pretender. On the other hand, the patient sometimes appeared to have been completely prostrated at once by the severity of the onset. However, in many of these the suddenness of the attack was more apparent than real, for a careful inquiry often revealed a previous stage of dyspepsia, debility and languor."

The studies progressed and Bruce discovered the organism in 1886; isolated it in 1887, and gave it the name *Micrococcus melitensis* in 1893. The name *Brucella melitensis* was proposed by Meyer and Shaw in 1920.

In this country, the early recognized cases occurred in men recently returned from the Tropics, the first being reported in 1898. In 1904, Col. C. F. Craig, Medical Corps, U.S.A., reported a case in the person of an army nurse, who had never been out of the United States. Craig in his report of this case suggested:

*Read at the 74th annual meeting of the Kansas Medical Society, Kansas City, Kansas, May 3, 4 and 5, 1932.

"That a careful study by use of the Widal test and the agglutination reaction with *Micrococcus melitensis*, of many of the cases of obscure continued fevers which are prevalent in this country will result in the demonstration that Malta fever is by no means a rare disease in the warmer portions of the United States, and that many of the so-called anomalous cases of typhoid fever are in reality instances of infection with the organism of Malta fever."

Ferenbaugh and Gentry, also army medical officers reported a series of cases from Texas in 1911 and offered the opinion that Malta fever had in all probability been present in that state for a period of at least twenty-five years. Additional cases were reported from the Southwest by other investigators in the succeeding three or four years. Then followed a lapse of some five years in which the disease was unrecognized or perhaps forgotten until interest was awakened by the report of Lake and Watkins of the epidemic in Phoenix, Arizona, in 1922.

During the period 1905-24, inclusive, 128 cases were reported in the United States and with the exception of seven cases, all from the states of New Mexico, Arizona and Texas. Twenty-four cases were reported in 1925 and 46 in 1926. Of the cases reported in 1926, 16 were from New York state; 1 from Pennsylvania; 2 from Ohio; 17 from Wisconsin; five from Illinois; four from Texas, and one each from Iowa and California. In the period 1905-24, cases were reported, almost without exception from goat-raising areas, but in 1926 for the first time numerous cases were recognized and reported from states where there were comparatively small numbers of goats. In 1927, 217 cases were reported in the United States; 647 in 1928; 1305 in 1929; 1385 in 1930; 1580 in 1931.

Bruce defined Malta fever as a "disease of long duration characterized clinically by continued fever, profuse perspiration, constipation, frequent relapses, rheumatic or neuralgic pains, swelling of joints or orchitis; bacteriologically by the presence in the blood of organisms of *Micrococcus melitensis* (now *Brucella melitensis*); anatomically by congestion

of the spleen and other organs."

According to Hasseltine:

"At the present time it appears that there are at least three strains of the *Brucella* germs that may cause undulant fever. These are known as the *caprine*, *bovine* and *porcine* strains. Huddleson has assigned to each a specific name, the *caprine* strain being *Brucella melitensis*; the *bovine* strain being *Brucella bovis* and the *porcine* strain *Brucella suis*. If this nomenclature should be accepted it will avoid some confusion, for the adjective used to specify a strain does not necessarily denote its source. Apparently cattle can be infected with all three strains, so a human case contracted from cattle may be due to any of the three strains. There is no record of swine being infected naturally with the bovine or caprine strains. Close study of the bovine and porcine strains of *Brucella abortus* show distinct differences in cultural, biological and pathogenic characteristics, which seem likely to result in these two being ultimately considered two distinct species."

According to Hardy: "The factors which determine the transmission of a particular disease from animal to man are dependent, in different localities, on (1) the incidence of the infection among animals, and (2) the degree of man's exposure, either direct or indirect. Variations in the habits and occupations of the people and their relation to animal industries, provide different contacts. For these reasons epidemiological studies on the same disease in different states may bring different facts to light. Herein lies the value of intensive local studies, as each may make a contribution to the general knowledge, which of necessity must be compounded of fragments gathered here and there."

Hardy and Haseltine collected epidemiological data on 442 cases of undulant fever, the cases being divided into three main groups: (1) those without significant exposure to livestock or carcasses, (mostly urban cases); (2) rural cases having direct contact with livestock; and (3) urban cases having direct contact with livestock or carcasses. These were designated as the milk, farm and

meat groups, respectively.

A bulletin on undulant fever was distributed to all Kansas physicians during the latter part of 1928, by the state board of health. This bulletin also contained brief summaries of sixty cases which had been reported during the preceding eighteen months.

Kansas, of course, we recognize as an agricultural state, which also has a large number of cattle and hogs, but comparatively few goats. Contagious abortion is reported present in many areas of the state. A very small proportion of the milk is pasteurized, this safeguard being largely practiced in the larger cities. Through contact with aborting animals or carcasses, plus the use of raw milk, opportunity is presented for infection.

The first cases of undulant fever were recognized and reported by Major C. C. Hillman, of the army medical corps while stationed at Fort Riley. Three cases were reported in March, 1928, although the onset occurred in September, October and December, 1927. In 1928, 14 cases were reported; in 1929, 85; in 1930, 99 and in 1931, 64. The total of cases reported for 1932 brings the grand total to more than 270.

Cases have been reported from 65 of the 105 counties, as shown in Fig. 1. Multiple cases were reported in three families: 3 cases in one family, and two cases in each of 2 families.

In the presentation of this data, varying numbers of cases will be used in the

OCCURRENCE OF CASES BY SEX AND AGE GROUPS

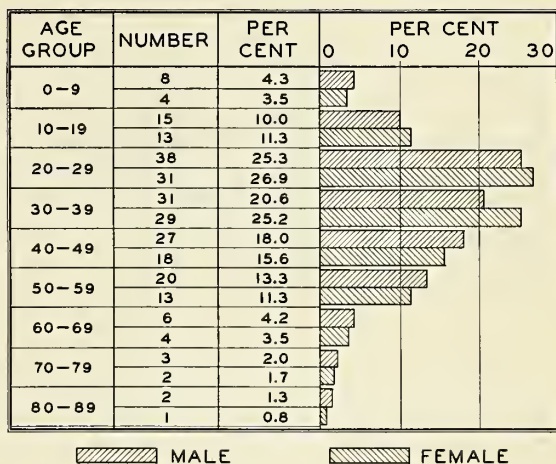


Fig. 2

different tables, the result of inability to secure complete epidemiological data in each case.

Occupations—Occupations of 267 cases were listed as follows: housewives and housekeepers, 82 (30%); farmers, farm laborers, dairymen, 54 (20%); students, 30 (11%); packing house employees, serum company, butchers and similar trades, 17 (6%) and all other, 84 (33%).

Sex—Of the 267 cases, 150 were males and 117 females.

Age—Of the 150 males, 97 or 63.9% were in the age group 20-49 years, while 78 of the 115 females, or 67.7 were in the same age group. Occurrence of cases by sex and age groups is shown in Fig. 2.

UNDULANT FEVER - DISTRIBUTION OF 267 CASES

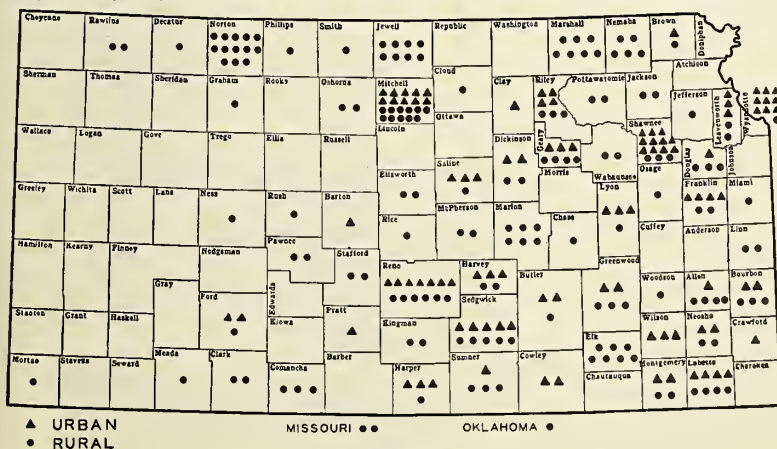


Fig. 1

Seasonal distribution—Cases in which the month of onset was given, regardless of year, are shown in Figure 3. It will be noted infections were reported as occurring each month of the year, but with the highest proportion during the spring and summer months, reaching the maximum in September.

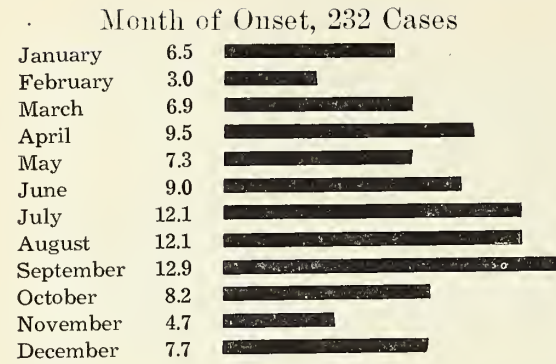


Fig. 3

Source of infection—In analyzing this data, the classification of the three groups previously referred to was used. This data is shown in Table 1.

Table I
Source of Infection—257 cases.

	Milk		Farm		Meat	
	M	F	M	F	M	F
Rural	24	55	64	9	1	0
Urban	44	49	2*	0	6	1
Totals	68	104	66	9	7	1
	172		75		8	
Percent	67.4		29.4		3.1	

*Veterinary students.

CLINICAL INFORMATION

Clinical types—Hughes described three types of the disease: the malignant, the undulatory and the intermittent, but also recognized an ambulatory form and an irregular variety.

Hardy states the majority of the Iowa cases were of the intermittent type, the onset being insidious, and a sense of progressing afternoon weariness first oppressing the patient. The majority of the infections lasted between six weeks and four months. Twenty-five per cent of the infections were classed as of the ambulatory type with quite insidious onset, the one constant symptom and occasionally the only one, being weakness or lack of endurance. The distinguishing characteristic of the undulatory type of cases was the occurrence of relapses. Fifteen per cent of the

Iowa cases suffered relapses, but even in these, typical undulations were rarely observed.

Onset—The onset may be gradual or insidious and many of the Kansas cases were reported as having a gradual onset. During this period, the symptoms varied greatly.

SYMPTOMS

The common signs and symptoms observed in 225 cases are shown in Fig. 4.

Three cardinal symptoms are present in undulant fever: weakness, temperature and sweating.

Weakness—This was the one most prominent symptom and occurred most frequently during the period of onset. It was reported absent in 4 per cent of the cases.

Sweating—This condition was reported in 88 per cent of cases. Frequently, comment was made of “drenching” sweats occurring while the patient was asleep and also numerous cases where sweating occurred in the upper half of the body and occasionally only of the head and neck.

Chills or chilliness—This symptom was present in approximately three-fourths of the cases, but was reported most frequently as a chilly sensation, rather than a true chill.

Pain—Headache occurred most frequently during the early stages of the disease. As it accompanied the rise in

UNDULANT FEVER
PRINCIPAL SYMPTOMS AND SIGNS OF 225 CASES

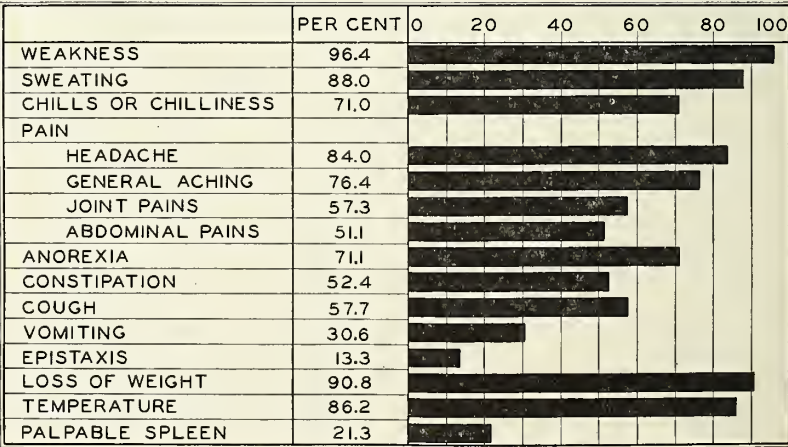


Fig. 4

temperature, it was most severe at the time the temperature was highest, usually in the afternoon. General aching was reported in approximately three-fourths of the cases, while joint pains occurred in slightly more than 50 per cent, as did also abdominal pains.

Anorexia—Loss of appetite was reported in 71 per cent. Complete loss of appetite extending over a period of days or weeks was reported in many of the severe infections.

Constipation—Constipation was reported in 52 per cent. Diarrhea was reported in only 11 of the 225 cases.

Cough—Cough, or a mild bronchitis was reported in 57 per cent.

Vomiting—This symptom was reported in 30 per cent. However, notation was made in a number of cases that vomiting occurred but one, two or three times and then during the onset of the disease.

Epistaxis—Epistaxis was reported in but 13 per cent of cases. Comment was made in a number of cases that nose bleed occurred but once or twice, and therefore cannot be counted as a constant symptom.

Loss of Weight—Loss of weight was reported in 9 of each 10 patients.

Temperature—Temperature was reported in 86 per cent of the cases. It cannot, however, be stated that patients contracting the disease do not have a temperature, but the reports were based on physician's observations, and many patients were seen during the convalescent period at which time they were undoubtedly temperature free. Maximum temperatures reported in 211 cases are shown in Table 2.

Table 2
Range of Temperatures.

	Number
N to 99.....	0
99 to 100.....	14
100 to 101.....	12
101 to 102.....	27
102 to 103.....	36
103 to 104.....	58
104 to 105.....	41
105 to 106.....	19
106 to 107.....	3
107 to 108.....	1

Palpable spleen—A palpable spleen was reported in 21 per cent of cases.

BLOOD EXAMINATION

Hemoglobin—In 127 cases, the average

hemoglobin content was 76 per cent.

Red blood cells—The average red blood cell count for 100 patients was 4,204,840.

White cell counts—White cell counts were reported in 113 cases. In fifty-six patients, a white cell count of less than 7,000 was reported. White cell counts are shown in Table 3.

Table 3
White Cell Counts.

White Cell Count	No. of Cases
1000 to 2000.....	1
2000 to 3000.....	0
3000 to 4000.....	4
4000 to 5000.....	11
5000 to 6000.....	15
6000 to 7000.....	25
7000 to 8000.....	11
8000 to 9000.....	16
9000 to 10000.....	17
Over 10000	13

Differential white counts were reported in 32 cases, the average being as follows:

Neutrophiles	63.19
Eosinophiles	0.95
Basophiles	0.73
Lymphocytes	29.75
Large mononuclears	5.38

Diseases which were first suspected when the patient consulted the physician, included: typhoid fever, 41; tuberculosis, 38; influenza, 23; undulant fever, 17; malaria, 17; typhoid fever or malaria, 9; puerperal infection, 6; rheumatism, 5; heart disease, 5; appendicitis, 4; hyperthyroidism, 3; gastro-enteritis, or colitis, 6; bronchitis, Vincent's angina, and kidney infection, 2 each. Single cases of syphilis, pneumonia, infected tonsils, septicemia, acute nephritis, lumbago, pleurisy, brain tumor, gall bladder infection, glandular infection, toxemia, focal infection, hay fever, and bladder infection. Report was not received of disease suspected in 63 cases.

Complications which develop most frequently include: endocarditis, arthritis, orchitis, mastitis and abortion.

DIAGNOSIS

The typical case presents a chain of symptoms somewhat as follows: Chilliness, the temperature rising step-like, usually slightly higher on each successive night—falling in the morning—until it reaches 103 to 105. Profuse night sweats are characteristic, generally occurring after midnight. The condition continues

about the same for six to eight weeks or more, then the temperature gradually declines and reaches normal or subnormal. In some of the cases, the temperature may rise again after a remission, lasting several days. In the interval between attacks of fever, the patient feels weak but generally otherwise normal. As these recurrences continue, lasting for months, there is a marked anemia and functional heart murmurs may develop. There is also loss of weight, extreme prostration, nervousness and the patient may become greatly depressed.

Rarely are patients dangerously ill and it is for that reason that a complete physical examination is so frequently neglected.

Laboratory procedures which are of value in diagnosis include: agglutination tests, blood culture, hemoglobin content, red, white and differential counts. Of these, the agglutination test is of the greatest value.

DIFFERENTIAL DIAGNOSIS

Diseases which are most frequently confused with undulant fever are: typhoid fever, tuberculosis, malaria, influenza, heart disease, rheumatism, septicemia and appendicitis.

Typhoid fever—Typhoid fever is becoming a rare disease, has a more rapid onset than undulant fever, the patient is usually toxic, has a sustained temperature and profuse sweating is absent. A carefully taken history plus a positive Widal or isolation of the organism will establish the diagnosis.

Tuberculosis—Tuberculosis and undulant fever have many symptoms in common, but laboratory tests will usually establish the diagnosis. Possibility of the co-existence of both diseases should not be overlooked.

Malaria—Malaria cases occur rarely in Kansas unless the infection is imported. Chills, however, are characteristic of malaria. A careful history and laboratory tests will establish the diagnosis in either disease.

Influenza—Approximately 12 per cent of the cases were diagnosed primarily as influenza. According to Hardy: The diagnosis of the case as influenza "is not because undulant fever has any simi-

larity to the acute respiratory infection which occurs in pandemics or epidemics, but because the name is used as an accepted label for all indefinite fevers. We can but advocate a more careful and general consideration of undulant fever and less misuse of the name 'influenza' as such, or its corrupted forms 'flu,' 'intestinal flu,' and 'summer flu'."

Heart disease—The course of an acute endocarditis is similar to that of undulant fever. Endocarditis, however, occurs as a complication of the disease. Again, the differential diagnosis frequently depends upon the laboratory.

Rheumatism—Rheumatism was considered as a primary diagnosis in but five cases, probably because of the complaint of pain in one or more of the joints.

Septicemia—A white count plus an agglutination test should differentiate the two conditions.

Appendicitis—A careful history, physical and laboratory examinations should again readily establish the diagnosis.

PROGNOSIS

During the years 1926-31, inclusive, 265 cases of undulant fever were reported in the state with 17 deaths, a case fatality rate of 6.4 per cent.

TREATMENT

As in most of the infectious diseases, no specific treatment has been developed. Angle was the first to call attention to the use of a specific vaccine and reports favorable results from its use, as does also Simpson. Acriflavine, mercurochrome, neo-arsphenamine and other drugs have been advocated, but apparently used with little success.

"Symptomatic treatment, general supportive measures, and good nursing, coupled with rest in bed during the febrile stages, constitute the greater portion of our efforts to assist nature in bringing about recovery."

PREVENTION

The true prevention of undulant fever is based upon the detection of the disease in livestock and the elimination of those infected from the herds. This, however, is a gigantic task and impossible of accomplishment in a short time. The prevention of undulant fever through the use of infected raw milk may be accom-

plished through pasteurization.

The farm group—It should be comparatively simple where only a few cows are used for the milk supply to have them tested for contagious abortion, with the elimination of those found to be infected. It would also seem logical in handling animals or livestock infected with the disease, the wearing of heavy gloves would prevent many cases arising from this source.

The meat group—Here again it appears the wearing of heavy gloves would reduce the number of cases, plus prompt attention to minor injuries, such as scratches or breaks of any kind in the skin.

PROGNOSIS

“The outlook for the patient is usually good as far as life is concerned, but no one can tell how long the disease will continue—it may last from a few months to a few years.”

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R

The atypical person is one who is emotionally unstable. His emotional reactions are the basis for his variation from the normal or average individual. The extent to which one is able to influence such a person by means of athletics is great. Atypical individuals can readily be discovered in three distinct classes: First, there are those who drag their feet, who are lazy, who do not get into activities. Second, there are those who are not particularly lazy and who have a great deal of ability but do not cooperate with other people. Third, there are those who are boastful, showing something of the bully. Instructors constantly see these three types of atypical cases in their work. To spend more time in straightening out these boys individually and to keep the normal boys active in groups are indeed worthwhile projects, suggests R. K. Atkinson in “Athletics for the Atypical,” in the February issue of “Hygeia,” the Health Magazine.

INJECTION OF VARICOSE VEINS WITH CHEMICAL ACTION*

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While treating aneurysms during the last half of the 18th century, Praraz and the School of Lyons observed the coagulating action of ferric chloride within the vein wall. They injected into veins two or three drops of a 30 per cent solution at weekly intervals and the vein became transformed into a fibrous cord. Weinheimer, in 1884, treated 32 cases with 411 injections of ferric chloride, giving as many as nine injections at one sitting. Among his patients there were 18 who developed partial gangrene and one an abscess. Several fatalities were noted and treatments were shortly abandoned. In 1880, Negrette used injections of ferric chloride but in too small a number of cases to arrive at a definite conclusion. Tavel of Berne used a 5 per cent phenol solution in conjunction with ligation of the internal saphena, with more or less satisfactory results. Wood, using ferric sulphate, obtained three complete cures in 11 cases. Valet used iodotannic fluid, probably because of its greater harmlessness and because of the antiseptic properties of the iodine. He had one radical cure in 300 cases. Ollier had one patient that died. Delore, in 1894, stressed the irritating and fibrosing action of the iodine-tannic acid solution rather than its coagulating action. Hence, from 1894 until 1911 the method of injection of varicose vein was abandoned for two causes: 1, Errors in technic and 2, unsuitable solutions.

In 1911, Blum, working with sodium bicarbonate in the treatment of diabetic coma, observed that the veins were obliterated after several injections. In that year, P. Linser, of Tubingen, made the same observation following the use of mercuric chloride in the treatment of syphilis and applied the solution for the obliteration of varicose veins. Later in 1922, K. Linser changed over to injections of salt solution of varicose veins on account of the toxic effect of the mercury. About the same time, P. Sicard of

*Read before the Wyandotte County Medical Society at Kansas City, October 17, 1931.

the Marseilles School of Medicine, using a proprietary preparation for the treatment of syphilis, made the same observation as Linser, namely, that the basile vein often became obliterated after injection, with a thrombus formation which sometimes occluded the entire venous tree of the arm and involved the axillary vein. However, no emboli detached. Analyzing the solution, he found that the thrombosing action was due to its sodium carbonate content. He found by using small amounts of sodium carbonate in 20 to 40 per cent solutions he could obliterate varicosities without any untoward results, provided his technic was perfect. However when the solution was injected outside the vein wall a slough resulted. He, therefore, added a few drops of methylene blue so that he could observe whether any solution was escaping into the tissues. Later on, Sicard used sodium salicylate, for he found it to have a much less caustic action than the carbonate, and by 1917 had popularized the injection treatment in France. In 1924, M. Bazelis, a pupil of Sicard, published his thesis on the treatment of varices by intravenous injections of sodium salicylate, after observation of the treatment for three years in thousands of cases, and made the remarkable observation that there had not been a single case of migration of the thrombus.

SOLUTIONS AND TECHNIC

In the past eight or ten years many solutions have been used in this country and abroad, each pioneer worker advocating his own solution, as Sicard of Paris sodium salicylate; V. Meisen of Copenhagen sodium chloride and sodium salicylate; McFeeters various forms of sugar chiefly invertose; White of Boston quinine urethane; de Takats of Chicago glucose and sodium chloride, and Angle and Kern of Johns Hopkins an equal mixture of glucose and sodium chloride. In the past few months French workers have reported excellent results from using 50 per cent glycerine, while English workers have been using sodium mauriate with good results.

According to literature one may say there are certain objections to any one of these solutions, but in the hands of

competent workers I am sure that results may be obtained from any one of them in the presence of proper technic. Many strong irritating solutions will give a severe cramp during and after injection as sodium chloride, quinine urethane and sodium salicylate; also these solutions when injected outside of the vein wall cause a slough. With the use of glucose or invertose alone the cramp is reduced to a minimum, but the results are not satisfactory as in the use of other solutions. During the past few years, I have used a mixture of glucose 50 per cent with equal parts of sodium chloride 30 per cent as suggested in 1929 by Kern and myself. There are many advantages to this solution as the cramp is reduced to a minimum. When injected outside the vein we do not get a slough and it is suitable for large or small veins.

As to dosage there is a wide variation according to the solution used which is from 1 c.c. for quinine urethane to 40 or 50 c.c. of invertose. In using a mixture of glucose and sodium chloride, the dose would range from 2 c.c. to 10 c.c. at one injection, never exceeding 20 c.c. when both legs are injected at the same time.

Syringe and needles—The ordinary 5 or 10 c.c. Luer syringe and 24 to 26 gage needles are used, depending on the size of the varix to be injected. We cannot over emphasize the fact that a successful vein puncture depends, to a great extent on the sharpness of the needle.

Site of injection—In the usual cases in which the varicosities are limited to the leg, injection is usually begun in the most prominent protrusion of the most distal varix. In those cases in which the varices are not only present below the knee but involve the internal saphenous vein for some distance up to the thigh, injection is best begun just below the knee so as to block the main channel. After this is accomplished the varices distally located respond quickly to the treatment. In fact, we have found repeated injections in the lower branches to fail until this was done.

We have not hesitated to inject varicosities in the upper third of the thigh and have caused thrombosis within two inches of the fossa ovalis. It is my feel-

ing that if the saphenous vein is dilated and tortuous above the knee and there are varices present below the knee, the entire affected venous tree must be obliterated, or there will be a recurrence of varices on the leg, because of the great downward pressure of the heavy column of blood.

Position of patient during injection—

(a) Standing is perhaps the most unsatisfactory position of all, both to the patient and to the operator. However, in some cases in which certain varices are prominent enough to be injected only when the patient is standing, it is the method of choice.

(b) The sitting position is perhaps more comfortable to the patient but less satisfactory to the operator. As the leg bends, the varix to be entered is distended. It is entered by the needle and the leg brought to a position of 90 degrees by the assistant, so as to empty the veins partially. During this shift in position, however, the vein is often ruptured, the needle is pushed through the posterior wall of the vein or pulled out of the lumen, and an unsuccessful puncture or injection is made.

(c) The horizontal is the most satisfactory position of all but unfortunately cannot be maintained in all cases. The patient is asked to stand, and while the varices are well distended a tourniquet is applied proximal to the site of injection. The patient then lies down, the varix is entered easily. A tourniquet is then applied distal to the point of puncture, now we relieve the proximal tourniquet to allow the vein to empty itself. After this is done the tourniquet is tightened, then the injection is made in an almost empty segment of vein. This allows the injected fluid to come in direct contact with the vein wall (intima), resulting in an inflammation and destruction of the endothelial lining. Some workers may find the use of tourniquet troublesome. In that case there are many appliances on the market which can be strapped to the leg which will block any desired segment.

In cases complicated by ulcer or eczema, an attempt is made to inject the varix, that is keep this area engorged

with venous blood. The varices in such cases are often hidden by the thickened tissues and are at times most difficult to locate. If the leg is raised and the vessels emptied of blood, the varix may be palpated as a deep channel between the scar tissue walls. Injection should be made well distal to the infected ulcer in order to avoid a septic thrombus. The healing of the ulcer or eczema will depend on the ability of the operator to find and inject the offending varix.

*Amount of solution—*The mixture of dextrose solution, 50 per cent, and of salt solution, 30 per cent, is used in doses of from 2 to 10 c.c. depending on the size and length of the varix to be injected. We never inject more than 10 c.c. into one varix and not more than 20 c.c. at one sitting.

*Injection—*The skin overlying the varix is cleaned with tincture of iodine followed by alcohol. Several minims of blood are aspirated after the varix has been entered and the injection is slowly begun, with alternate aspirations of blood and injections of solution, so that one may be sure that the needle is always within the lumen of the vein.

After the injection is completed, the needle is quickly withdrawn and pressure applied with a gauze sponge until the puncture is closed. The patient is then asked to keep the leg in a horizontal position for 15 minutes and often the vein can be felt as definitely thrombosed before the patient leaves the table. If the injection has been made with the patient in the prone position, thrombosis will occur proximal to the point of injection; however, if the patient was standing it will be distal to this point. A firm pressure bandage taking in the entire leg and foot is applied and worn continuously during treatment and for three weeks after the last injection in order to support the veins until complete organization of the thrombi has taken place.

Injections are repeated every other day or twice a week, depending on the patient. The number of injections required to obliterate individual varicosities varies too widely to permit a definite statement. Many times the larger thick-walled tortuous veins respond more

quickly than those with thin walls.

Clinical effect of the injection—When the patient returns 48 hours after treatment, he may or may not complain of discomfort in the legs. The majority of patients are unaware that anything has happened to their veins until palpation reveals slight tenderness along the course of injection. The vein can be palpated as a firm cord about one-third its former size. The skin over the vein is discolored slightly having a light bronze-cast which is thought by some to be due to the destruction of the sympathetic fibers accompanying the vein. We feel that it is due to the inflammatory process involving the vein and deeper layers of the skin.

EXPERIMENTAL WORK

Operation — (Dogs were used as subjects). Under ether anaesthesia a longitudinal incision about three inches long was made directly over the jugular vein. With blunt dissection the vein was exposed for about two inches. A silk thread

was passed under the vein at the distal part and a like thread was passed under the vein at the proximal part, sufficient traction was made on each until the vein was almost empty of blood then with a small syringe and a very fine needle the solution was injected within the vein lumen, the threads being held intact for at least five minutes to allow the irritating solution to come in contact with the intima of the vein. The threads were

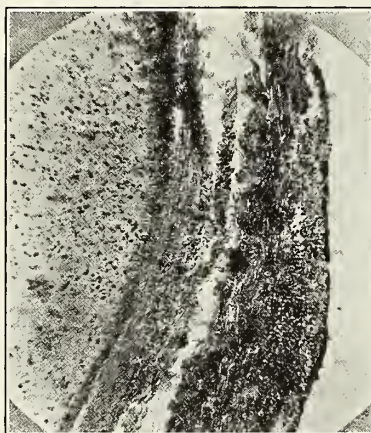


FIG. 1

Cross section of external jugular vein of dog removed 48 hours after injection with 5 minims of 30 per cent sodium chloride. Presenting vein wall and thrombus, leukocytic infiltration of vein wall with inflammatory reaction—low power.



FIG. 2

Cross section of external jugular vein of dog removed 72 hours after an injection of 5 minims of a mixture in equal part of 50 per cent glucose and sodium chloride 30 per cent. Presenting an occluded lumen by a firm thrombus, an absent endothelium with an inflammatory reaction in the media and adventitia—low power.

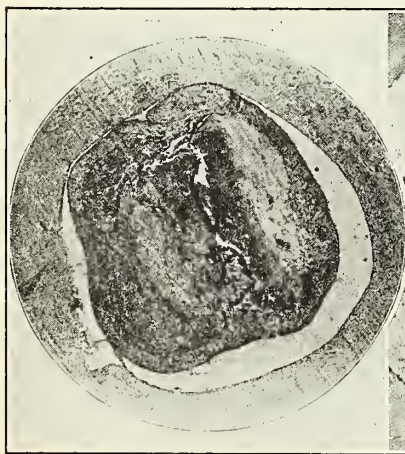


FIG. 3

Cross section of external jugular vein of dog removed one week after injection of 5 minims of 30 per cent sodium chloride. Presenting vein wall and thrombus with many fibroblast growing into the thrombus—low power.

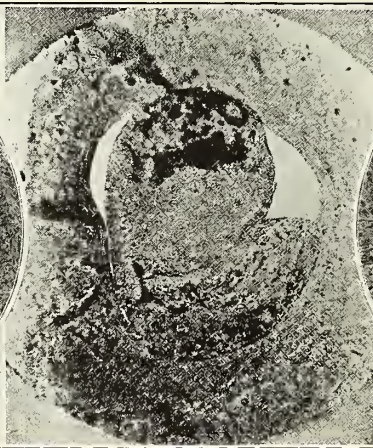


FIG. 4

Cross section of external jugular vein of dog removed two weeks after injection with 30 per cent sodium chloride. Presenting entire thrombus and a portion of vein wall, a two-thirds organized thrombus, and a central core of unorganized blood—low power.

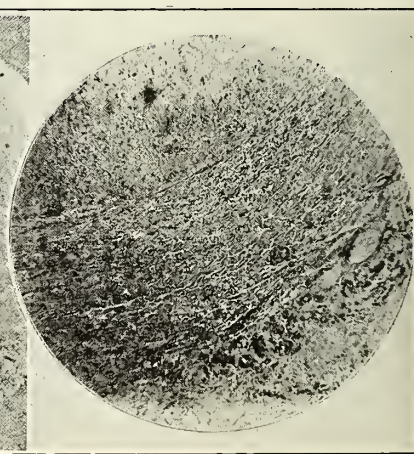


FIG. 5

Cross section of external jugular vein of dog removed four weeks after injection of 5 minims of 30 per cent sodium chloride. Presenting an almost completely organized thrombus, a dark area of unorganized blood and fibrous tissue formation in the media—low power.

withdrawn and the wound closed in the usual manner.

RESULTS

Specimens of the veins were removed at various intervals. Specimen 1, presented an inflammatory reaction of the surrounding tissue. The vein was decreased in size and on section it contained a hard and firm thrombus which was difficult to dislodge. There was no fluid blood (Fig. 1).

Specimen 2, presented marked fibrous of surrounding tissue with a vein which had decreased markedly in diameter and contained a firm hard thrombus.

Specimens 3, 4 and 5 presented essentially the same process but in a more progressive state toward fibrosis.

CONCLUSION

1. The injection method is the method of choice over the operative procedure.

2. The contra-indications are: (1) active on latent phlebitis; (2) obstruction of deep veins, and (3) arterial diseases of the extremities.

3. A mixture of 50 per cent glucose and 30 per cent sodium chloride is an ideal solution.

4. The horizontal position is the best to use when possible.

5. Little or no danger accompanies an injection when done by a careful operator.

6. Best results are obtained when the injected fluid is allowed to remain in direct contact with the intima of the vein wall for the longest period practicable in its highest concentration.

—R—

"Clean, Safe Milk," S. V. Layson explains in *Hygeia* in the January issue, comes from the healthy, tuberculin-tested cow; it is kept clean by being handled by healthy dairymen, by being kept in sanitary containers, by pasteurization and by adequate cooling systems. "The sanitation of milk should start the instant it leaves the udder of the healthy cow," the author explains. It would be mutually advantageous to producer and consumer if the city milk supply received more interest from its consumers, in regard to the source and quality of the milk.

BIRTH INJURIES IN THE NEWLY BORN*

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In the past few years a great amount of work has been done and a number of articles have appeared in the literature on the subject of "Birth Injuries in the Newly Born." In our own state of Kansas, we have only been recording birth injury as a cause of death since 1925; since that time deaths due to this cause have steadily increased. Surveys of the crippled children problem, in this state and in the surrounding states, have shown that 20 to 25 per cent of our mental deficiencies and late cripples are due to the condition classified as birth injuries in the newly born.

In attending a Rotary clinic for crippled children several years ago, I was struck by the continual reference of the examiner that this and that case was due to a birth injury, and as far as their orthopedic treatment was concerned, nothing could be accomplished unless the underlying spastic mental condition and associated endocrine disturbance were improved. This particular meeting increased my interest in the subject and after reviewing the work of about thirty different authors, I shall present in condensed form, a few conclusions that were reached in their papers on the subject of birth injury.

In spite of the fact that attention is being called constantly to this condition of newly born infants, both by the obstetricians and pediatricists, it still continues to occur with a disquieting frequency. It has been the custom to attribute intracranial hemorrhage to poor obstetrics, and while it is still true that trauma is the great single factor in causing cerebral birth injury, still there are other causes altogether unrelated to obstetrics, such as: prenatal toxemia, asphyxia, prematurity, sepsis neonatorum, high viscosity of the blood, congenital anomalies, imperfect vascular development and syphilis. The difference occurring by the intra-atmospheric pressure is also spoken of as a contributing cause.

*Read before the Shawnee County Medical Society at Topeka, September 5, 1932.

One of the most common lesions shown by post mortem is the tearing of the tentorium, though damage to the falx cerebrae, to the tributary veins of the longitudinal sinus or to the veins of Galen, may also give rise to bleeding; hemorrhage from the choroid plexus may fill the ventricle with blood. Hemorrhages of any extent into the brain substance are probably not very common, although petechial hemorrhages of the brain substance are of frequent occurrence. The condition which has been emphasized from the obstetrical standpoint and most frequently causes trouble of this nature, is the breech presentation. The sudden compression of the head, perhaps in the long diameter, often causes serious injury to the after coming head. Next to this the indiscriminate use of pituitrin has been most frequently mentioned. It is needless to describe the action and danger of this drug.

The symptoms most frequently noticed in cases of intracranial hemorrhage of the newly born may be immediate or may be delayed for several days after parturition. One of the first things noticed is the cessation of the normal nursing after it has once been established. The child may be restless or cry with a high shrill cry spoken of in literature as a meningeal cry, or it may be very quiet and limp. It is usually pale and often has what the nurse describes as blue spells. The pulse may be either slow or rapid, the temperature normal or subnormal, but usually elevated. If the child has taken but a small amount of fluid and is dehydrated, the temperature may become higher. Respiratory difficulty is a frequent symptom and Cheyne-Stokes type of respiration is not uncommon. Bulging of the anterior fontanel, while often present, is not a common symptom. Blood in the spinal fluid is an important symptom. There occurs an inability to suck and a difficulty in swallowing. There may be signs of cerebral irritation, such as twitching of the hands and feet, sometimes slight convulsions. Nystagmus is often noted. Vomiting is quite a common symptom. Death may occur very suddenly without previous symptoms indicative of intracranial hemorrhage. The pro-

longation of coagulating time must be considered as a predisposing factor, but not one of prime importance. One point that must be kept in mind and it is not mentioned in our recent text books, is that hemorrhage may be limited to one organ or part, or it may be general in character, involving the skin, mucus membrane, meninges and the parenchymatous organs. Bleeding may manifest itself in the form of oozing from the umbilicus, skin, mucus membranes of the mouth, stomach or intestines, vomiting of blood, passing of a bloody or tarry stool. The most common type, and one which can easily be overlooked is in the form of subcutaneous or concealed hemorrhage. Cerebral hemorrhage has been reported as a cause of 76 per cent of deaths in the newly born. It is probably the cause of more than half the deaths caused in the first few days of life. Many infants suffering from intracranial hemorrhage suffer with the subsequent untoward effects; on the other hand there are infants who survive but with permanent injury to the nervous system. The extent of damage by hemorrhage will depend largely upon the location and size of the extravasation and the amount of absorption which later takes place. In some cases there is considerable absorption and yet enough residue to cause an ill behaved baby for the first 12 to 24 months of its life, caused without doubt by the cerebral lesions. After summing up the opinions of such outstanding authorities as DeLee, obstetrician; Swartz, pathologist; Ehrnfest, pediatrician. I quote the following conclusions:

(a) That birth injury occurs much more often than we suspect.

(b) Practically all prematures are potential bleeders.

(c) That small frail babies are predisposed to hemorrhage.

(d) That breech presentation and podalic version add a great risk of producing intracranial hemorrhage.

(e) That high forceps delivery and mid forceps delivery are also potential danger. Low forceps are not considered as such a great factor.

Prolonged labor, over 2 hours after dilatation is considered complete, de-

mands on good obstetrical authority—the immediate application of forceps. Cesarian operation practically never induces hemorrhage in the new born.

As to treatment: It is considered good obstetrical practice to give whole blood intra-muscular or subcutaneously as a prevention against hemorrhage, to any child having any degree of asphyxia, premature delivery causing extreme molding of the head, or difficult forceps where the baby is slow to breathe, (blue baby). Vigorous artificial methods to induce respiration of the new born are condemned because of the possibility of increasing hemorrhage. The following seems to be the approved method of resuscitation: direct breathing from the operator through gauze into the baby's mouth, possibly giving the baby between $3\frac{1}{2}$ and 4 per cent carbon dioxide, which is a true stimulus to the respiratory center.

Another method is the submerging of the child up to the neck, in hot water, continuing the respiratory methods as described. A child suspected of having cerebral hemorrhage should be kept absolutely quiet in its crib; the temperature kept at an even degree; breast feeding should not be attempted, but the dropper method or the Breck method used. The failure to suck is an early symptom of cerebral injury or pressure and is due to injury of the sucking center in the brain; no manner of stimulus will circumvent this action. Any further sign of brain hemorrhage, in the first 24 hours, should be followed by spinal puncture, but before doing the puncture determine the coagulation time. If the clotting time is slow, whole blood should be given again before spinal puncture is done. Spinal puncture should be repeated as often as from 12 to 24 hours until spinal fluid is clear of blood. Whole blood can be given simultaneously with puncture. It is said that draining the blood from the spinal fluid in the liquid form is better than letting it clot. A sedative, such as chloral hydrate, of 10 to 15 grains may be administered per rectum every three or four hours as needed for restlessness or spasms. Spinal pressure should be determined at each punc-

ture and the spinal tapping continued until the pressure is within normal limits. The normal pressure for an infant is from 3 to 7 cm. (water monometer); anything over 10 cm. in the new born, is considered pathognomonic of brain injury. Early and repeated punctures and administration of whole blood will enhance the prognosis a great deal and in ordinary cases recovery can be expected under proper treatment. Later treatment should consist of most careful handling of the child. It should not be stimulated or handled too much. Feeding should be given careful attention as it is always a problem. Spinal puncture should be used until such time as the pressure and symptoms indicate that it is not necessary for further progress. Coagulation time should be taken before each puncture and whole blood should be used when indicated. Reflex symptoms are not of great value until after the child is 7 months old. Before this age the nerve and cross tracts have not sufficiently developed to give valuable or reliable information. The child will assume a mask-like expression and fixation of the eyes for a good many months. This does not necessarily mean a bad prognosis but should council a guarded one. The child may not sit up until it is one year old; may not walk until it is 12 to 18 months or two years old and still turn out quite normal in later years. Case reports indicate that two years is usually the earliest period to determine the final outcome. However, we have recently reviewed articles on surgical operations on the late cases. We find they have been relatively successful in many instances, even up to 9 years of age. Orthopedic measures may be used after three or four years. Decompressions may be useful to control the pressure after spinal punctures fail to do so. It is of interest to know that Dr. Little of England, for whom Little's disease was named, wrote in 1846 the first paper in regard to paralysis of the new born and at that time he thought it was due to non-development of brain tissue. Nineteen years later he wrote a second thesis in which he stated 70 per cent of the hemi-

plegias and paraplegias were due to birth injuries.

Prevention is the best treatment of birth injury. The administration of whole blood immediately following the delivery or shortly thereafter is considered good obstetrics in any case which shows the slightest suspicion of trouble. Hemorrhage may occur in other organs, such as the endocrine glands, as well as the brain, and late treatment should be directed toward those lines as well as control of the spinal pressure.

For the past two years I have had under my care a number of cases resulting from birth injury. It is needless to say that it is not an encouraging practice but people with these children desire everything to be done that can be done, in hopes that some improvement may occur. I never give a favorable prognosis on any of the late cases but tell the parents there is a definite line of procedure to be followed. The late treatment consists of proper vitamin balance in the diet, spinal punctures, with careful determination of the pressure, serological examinations, and attention to any endocrine disturbance that might be present. If improvement occurs, later orthopedic measures should be instituted to lessen the ultimate deformities. It must be remembered these cases are both hopeless and helpless if neglected or left untreated. If you can get them out of the helpless class you have accomplished something to relieve the parents of their fearful burden. We have been giving this subject careful thought for the past two or three years and we believe, in a number of instances, by timely and early treatment we have saved a number of children who otherwise might have been mentally and physically crippled for life.

—R—

Maxwell Finland and Wheelan D. Sutliff, Boston (Journal A.M.A., Feb. 25, 1933), observed in a group of forty-six cases of pneumonia due to the type II pneumococcus and treated with specific antibodies, that the death rate was considerably lowered and that there was a rapid amelioration of fever and symptoms in comparison with contemporaneous non-serum treated and comparable cases. They believe that the favorable results in their cases were, in their opinion, due to at least three important factors; namely, early treatment, the use of large doses of potent serums, and persistence in the treatment of severe cases.

CATION BALANCE THEORY OF HYPERTENSION*

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The apparently great increase of the incidence of hypertension in the last few decades has become a cause for alarm to the medical profession as well as to the laity. The toll of life and disability this condition exacts from all walks of life has caused numerous investigations and continued research. Remedies have been devised and advised in the treatment of this disease, but none have been universally successful. Similarly, many theories have been advanced about the etiology of this condition, and none have met with universal acclaim.

Osler already said, in discussing the cause of high tension, that it is likely that the primary difficulty is somewhere in the capillary bed, in that short space in which the real business of life is transacted. However produced, the important point here is that this hypertension itself leads to arterio-sclerosis, which can be produced experimentally by the injection of epinephrin and other hypertensive substance.

This statement is elaborated in further detail by Weiss and Ellis. They found that, even though the average resistance of the arteriolar system of the greater circulation is twice as great as in normal control subjects, the circulating blood volume, the cardiac output per minute, and the mean velocity of the circulation are either normal or slightly below normal. These findings confirm their previous work in which the capillary pressure in hypertensive patients was found to differ but little from that of normal controls. They believe that hypertension might be a compensatory phenomenon designed to maintain normal tissue oxidation through a normal capillary blood flow.

Stieglitz states that anything that irritates the arteriolar musculature or stimulates the sympathetic pressor fibers may represent the original cause of hypertensive vascular disease. Some of the commonly known "initiating factors"

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are endocrine disturbances, dietary irritants, infections, intoxications with metals or chemical irritants, anemia and predisposition to early fatigue of the vascular structures. The perpetuating factor is the vicious circle of spasticity causing muscular fatigue, the fatigue leading to increase of arteriolar irritability, and in turn more spasticity and fatigue. This process, if not checked, leads on to degeneration of the hypertrophied arterial muscle, with subsequent fibrous tissue replacement and arteriolar sclerosis which later stages are not reversible. In other words, continued irritability of the arteriolar musculature may lead to a Gull and Sutton type of arteriosclerosis.

The task, therefore, is to find the irritating substance and eliminate it, if possible, in order to prevent the occurrence of this train of events. The ordinary metabolites cannot be blamed. Some theories hold responsible increased suprarenal activity, cholesterinemia, an excess of dimethylguanidine sulphate in the blood or some pressor substance retained in the blood and causing vasoconstriction. No attention has been given, so far, to the normally present inorganic constituents of blood and their relative importance. Yet one of the most important and effective therapeutic measures in hypertension is a salt free diet. In Europe, the most widely advocated treatment is mineral waters and mineral baths. The beneficial results obtained must be explained by an altered mineral balance in the body. The four important metallic ions, the amounts present in blood serum and relative proportions are:

Sodium	.....330	mgm per 100 cc	100
Potassium	.....16-22	mgm per 100 cc	6.5
Calcium	.....9-11	mgm per 100 cc	2.7-3.3
Magnesium	.....2-3	mgm per 100 cc	0.9

(Hawk and Bergeim, Pract. Physiol. Chem.)

In this connection I want to quote some paragraphs from McCallum: "The Inorganic Constituents of Blood of Vertebrates, and Its Origin."

The first suggestion bearing on the origin of the inorganic composition of the blood of animals was made by Bunge, who, pointing out that we have inherited the notochord and the branchial clefts

from marine ancestors, asked why the high percentage of sodium chloride in our tissues should not be an heirloom from life in the sea in that remote past. Eight years later, R. Quinton enunciated the view that "in the great majority of animal organisms the internal medium, the circulatory fluid or haemolymph is from its inorganic constitution but sea water. In support of this, he advanced a number of facts bearing on the internal medium of animals as compared with the composition of sea water, but the parallelism was only in a few instances extended beyond the amounts of sodium chloride in the two media.

In 1930 in discussion of the inorganic composition of certain medusa the author, unaware of the speculations of Bunge and Quinton, advanced the view that the blood plasma of vertebrates and invertebrates with a closed circulatory system is, in its inorganic salts, but a reproduction of the sea water of the remote geological period in which the prototypic representative of such animal forms first made their appearance. It was pointed out that in many invertebrates with a vascular system still freely communicating with the exterior, the circulatory fluid is sea water and this was probably the case also with ancient oceanic forms. The tissues in these later had through a long period of time become so accommodated to the composition of the sea water of the period that when the circulatory system acquired the closed condition the composition of the sea water of that period was, with slight modifications, reproduced in the vascular fluid and thus transmitted to the descendant forms living in different habitats. As corroborative of this view it was shown that even between the blood serum of mammals and that of the ocean today there is a striking resemblance. This is not in concentration, for the salinity of the ocean is about three times that of mammalian blood serum, but in the relative proportions of the sodium, potassium and calcium as indicated:

	Na	K	Ca	Mg	
Blood serum	.....100	6.69	2.58	0.8	(a)
Blood serum	.....100	6.5	2.7-3.3	0.9	(b)
Ocean	.....100	3.66	3.84	11.99	

(a. MacCallum, b. Hawk and Bergeim)

I have added in this table under the figures for blood serum given by MacCallum my own as calculated from Hawk and Bergeim. The resemblances are very close except in the magnesium, but this exception and the minor differences were explained as due to the alteration in composition which the ocean has undergone since the invertebrate form arose, for not only has there been an increase in the saline composition of ocean water but there has obtained a change in the proportion of the basic constituents. This has been brought about by the continued elimination of the potassium and calcium and the retention of the sodium and magnesium derived from the river discharge from the land areas of the globe.

In a subsequent communication these observations were amplified and evidence advanced to show that the history of the composition of the ocean fully accounted for the difference between the composition of the sea water today and the inorganic composition of the mammalian blood plasma.

It would seem accordingly that in the power which the kidneys exercise of regulating and rendering constant uniform not only the saline concentration but also the ratios of sodium, potassium, calcium, and magnesium in the blood of vertebrate so far examined, we have to deal with a function of primal importance inherited from a provertebrate or eovertebrate type. This property was fundamental to evolution. So from the composition of the blood plasma of vertebrates we may infer the relative composition of the ocean in the remote past, when the vertebrate kidney acquired the function of controlling the salts and their concentration in the blood. This would give the ocean of that age in round numbers.

	Na	K	Ca	Mg
Old	100	6.0	3.0	1.5-2.0
Pre-ent	100	3.6	3.9	12.1

Whether or not we accept MacCallum's speculations, we must admit the probability that since the beginning of the second half of the geological period the vertebrate vascular system has been adapted to, and has maintained a Na:K:Ca:Mg: ratio of approximately (in round

figures) 100:6:3:1. This cation balance is of great importance and it is well to remember that the sodium ion is antagonistic to calcium, potassium, and magnesium.

ACTION OF SODIUM ION

We should consider here some of the actions of sodium ion. There have been repeated statements in the literature stressing the importance of the sodium ions as a cause for the fluid retention in edema. Barker, in a recent article on "Edema as Influenced by a Low Ratio of Sodium to Potassium Intake," says that more thought should be given to the minerals ingested by the patient chronically ill with edema. Twelve of his sixteen patients lost their edema when given potassium chloride as a substitute for table salt provided they were placed on a full general diet with an acid ash excess.

Even isotonic sodium chloride solutions are injurious to isolated tissues. The function of isolated tissues requires exactly "balanced" solutions of the type of Ringer's, Locke's or Tyrode's solutions. This is not necessary in the intact animal because the regulating mechanisms of the body rapidly restore the normal concentration and ion ratio of the blood. (Sollman).

In investigating the role which sodium chloride played in the exacerbation of symptoms in various sympathetic dermatoses, Keining and Hopf made some very interesting experiments. In selected urticaria patients with no allergic reaction to any certain substance, intradermal injections of isotonic solutions of various sodium salts (chloride, sulphate, carbonate) produced definite wheals. On the other hand, similar tests on NaCl sensitive patients with isotonic solutions of the chloride of Ca, K and Mg were negative, proving that the detrimental action of NaCl was due to the Na-ion. A balanced salt mixture, containing Na, K, Ca and Mg ions in the proportions found in blood serum failed to exacerbate symptoms and when injected intradermally in isotonic solution did not produce wheals in these patients. In treating their patients with a salt mixture of this kind in the diet and strict avoidance of ordinary table salt they obtained surprising re-

sults. An excellent summary of the work of Keining and Hopf as well as further observations with this equilibrated salt diet can be found in a recent article by Eller and Rein in the New York State Journal of Medicine of Nov. 15, 1932.

If we bear in mind that ordinary table salt is almost chemically pure sodium chloride, we can see how it is possible to disturb the normal cation balance in the body through long excessive intake. With ordinary diets, the NaCl intake varies from 10-15 gms per day, which is greatly in excess of the actual needs of the body. It is surprising that the mechanism for disposing of such quantities of excess NaCl is so efficient that the normal cation balance is not more often disturbed.

Hofmeister has shown the liquifying tendency of the sodium ion on colloids in a slightly alkaline medium (such as found in the body). A permanent change in the normal cation relations of body fluids in the direction of Na-excess therefore must exert a detrimental effect on the cell membranes with which it comes in contact. Alteration of the physiological state of cell membranes leads to alteration of stimulus reception and conduction, and increased irritability. If we apply this to the arteriolar muscle cells, the endothelial cells and sympathetic pressor fibres we have an apparent cause for the very factors which as I have pointed out, are responsible for the production of hypertension. I do not mean to say that cationic imbalance is necessarily the sole cause for hypertension, just as Keining and Hopf have shown that vegetative dermatoses, dependent on an increased irritability of the vegetative nervous system, may be maintained and further developed through other causes than the underlying cation imbalance.

Some supporting evidence of this theory can be found in reports of Thomas and Heinbecker on the health and metabolism of Eskimos. Eskimos live on an exclusively carnivorous diet. Contrary to general opinion the Eskimo eats very little fat or blubber. Like other carnivorous animals he obtains a sufficient supply of salt in his food, and outside of

that there is no salt available (except possibly sea water). In other words, the salt intake of Eskimos is balanced in the cation proportions, as it is in the flesh of the animals he eats. Thomas states that among 142 adults between ages 40 and 60 who were completely examined, the average blood pressure was 129 systolic and 76 diastolic.

It has often been said and probably justly so that hypertension is a disease of civilization. Civilization is responsible for the production of chemically pure NaCl as table salt and discarding as "impurities" admixtures of calcium, potassium and magnesium salts which are naturally present—although in varying amounts and proportions—in almost every natural source. Our forefathers, like primitive people of today, did not use refined salt. It is more than a bare possibility that unrefined salt provides a sufficient quantity of the ions which are antagonistic to sodium to prevent the injurious effects of sodium excess. In my opinion, this may be the real reason for the increase of hypertension in the last few decades, a more plausible explanation than to blame the high pressure mode of living, the lead in water pipes or even carbon monoxide fumes.

Clinical applications of these theoretical considerations have already been made in the treatment of various diseases in which a salt-free diet is indicated. A new modification of the Herrmannsdorfer-Sauerbruch diet allows the use of a cation-balanced salt. Table salt restriction, which reduces the sodium intake, tends to restore normal cation relations. Similarly, the equilibrated salt mixture likewise tends to re-establish normal cation relations because its sodium content is brought into definite relationship with the antagonistic ions K, Ca and Mg and thus rendered harmless. While the action of a salt-restricted diet and that of a diet salted with this equilibrated salt appears to be analogous, the palatability of their constituent foods will differ widely.

The importance of the sodium ion as a cause for fluid retention has already been mentioned. Therefore a cation-balanced salt is suggested in subacute and chronic

nephritis as well as in cardiac and circulatory conditions with a tendency to edema. Whether or not the use of such salt in the treatment, and especially in the prevention of high blood pressure is beneficial remains to be seen. In presenting a new theory of the etiology of hypertension, to which I like to refer as "cation balance theory," I am fully aware of its speculative character, unsupported by any direct evidence. But if the evidence in support of this theory is scant, at least there is no evidence to the contrary.

SUMMARY

Hypertension is a disease of civilization. Anything that irritates the arteriolar musculature or capillary walls may start a vicious cycle ultimately leading to hypertension. The irritating properties of excess sodium ions in body fluids have been demonstrated. The vertebrate vascular system has been adapted to and has maintained a certain cation balance. Excess intake of pure NaCl in food upsets this balance by exhausting the antagonistic ions. Theoretically it should be possible to prevent high blood pressure and to break up the vicious cycle started by sodium excess by giving a dietary salt which is balanced in the proportions of sodium to sodium antagonists.

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—R—

Frederick G. Dyas and Richard Davison, Chicago (*Journal A.M.A.*, Jan. 28, 1933), invites attention to the increasing frequency of peripheral nerve injuries as the result of automobile accidents. Lacerated wounds caused by flying glass frequently produce scars that contract and impinge on important nerve trunks. The resulting paralysis simulates closely division of the involved nerves. The authors report a case illustrative of the difficulties of diagnosis in cases of constricting scars and the brilliant results obtained by liberation of the compressed nerve trunk.

EXPERIMENTAL WORK ON DEMENTIA PRAECOX

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After a chemical and physico-chemical study of the blood in dementia praecox, I observed a change in the electric charge of the globulins, an increase of the surface tension and an unstable ionic equilibrium. Some drug tests and the examination of reflexes of the patients, together with the chemical and physico-chemical findings, have led me to believe that dementia praecox is essentially a state of sympaticotonia with an increase of Ca and H ions and a decrease of K and OH ions in the cellular medium. The high percentage of cases showing urobilinogen and indican in the urine and black precipitate in the presence of silver nitrate indicated that the basic cause of the trouble might lie in the liver.

I discovered, during ultramicroscopic examination of the serum and plasma, a picture characteristic of the disease. I found, in the blood serum, a great dispersion of the micellae in direct relation to the clinical state of the disease and, sometimes, some very small agglomerations indicating the beginning of flocculation. Due to the presence of more libile proteins in the plasma there is a greater tendency to form both small and large agglomerations of the coarse micellae.¹

With the idea that troubles of a colloidal nature were present in the micellar and intermicellar medium, I decided to apply the hemoclastic crisis test of Professor Widal, and the colloidal reaction of Lange in my study of dementia praecox.

According to the original studies of Professor Widal, normally, after a meal rich in albumins, a part of the proteins not entirely split, pass into the portal vein, during the two hours following the ingestion, and reach the liver, where they are fixed and transformed. If the liver is unable or insufficient to perform its normal functions these unsplit proteins pass the hepatic barrier and enter the blood stream, causing a colloidal disqui-

1. *Pathologica*, No. 481, November, 1931, and No. 493, November, 1932.

*Pathologist, Topeka State Hospital.

librium, an hemoclastic or colloidoclastic shock. This shock is easily discernable by the hematological changes, leucopenia and decrease of polymorphonuclears, following the ingestion of albuminoids.

The hepatic insufficiency, as shown by such test, with abnormal excretions of urobiline and biliary salts in the urine, constitutes, for Widal, the signs of hepatism. A typical figure of such test is shown:

Count previous to test meal.....	9,050
Twenty minutes after test meal.....	6,350
Forty minutes after test meal.....	6,475
Sixty minutes after test meal.....	6,100
Eighty minutes after test meal.....	6,000

The differential count gave 70 per cent polymorphonuclears previous to the test; 50 per cent sixty minutes after.

It is to be seen, from the colloidal reaction applied to the serum, that there is a marked difference between the serums of the normal subjects and the patients; due, no doubt, to the instability of colloidal equilibrium in dementia praecox.

In autopsy material, consistently I have found anomalies of the gastro-intestinal tube, fat degeneration of the liver cells around the porto-biliary spaces, and a varied brain pathology.

To determine the truth of a possible failure of the liver, I started a series of experiments on rabbits. In the case of catatonia there are physical signs of disease, such as stupor and rigidity, which can be reproduced at will by the use of drugs. The lesions of the liver and brain attract most attention in the rabbits treated with luminal. The liver already macroscopically was enlarged and somewhat granular. On section it showed yellow spots in a dark environing tissue; microscopically, chiefly in the peripheral area, there is evident degeneration of the hepatic cells. Many of the cells show vacuolization due to fat degeneration, others show only a pyknotic nucleus in degeneration, while all the cytoplasm is filled with fat, while others show a granular cytoplasm. The sinuses are congested and dilated and here and there small hemorrhages are present. Around the vessels there is a certain proliferation of the connective tissue with some strands running between the parenchyma. The brains showed various lesions of the cortex and basal ganglia.

What I would like to emphasize is a certain similarity of pathological findings with dementia praecox where the lesions of the liver are, in my opinion, undoubtedly the factors determining biochemical changes acting on the brain colloidal equilibrium.

The slow intoxication experimentally produced in the rabbits determine an impairment of liver function with definite lesions and changes in the cells of the nervous system. The symptomatology observed during such intoxication recalls some of the physical signs observed commonly in dementia praecox of the catatonic type.

Is there any relation between liver function and nervous function? Is there any neurotropic action or secretion of the liver or is it the lack of detoxicating power of the liver which permits some toxic substance to injure the fine architecture of the nervous cells, or is it rather an altered biochemism brought about by a lesion of the liver?

I point out only that there is a certain functional correlation between the liver and the nervous tissue. The finding of lesions in the liver in dementia praecox offers confirmation on experimental grounds.

—————R—————

"WHEN, AS AND IF"

the bottle-fed baby exhibits symptoms indicating partial vitamin B deficiency—described by Hoobler as (1) anorexia (2) loss of weight (3) spasticity of arms and legs (4) restlessness, fretfulness (5) pallor, low hemoglobin, etc.

Dextri-Maltose with Vitamin B may be used in adequate amounts (up to 71 Chick-Roscoe units) without causing digestive disturbance. This ethically advertised product derives its vitamin B complex from an extract of wheat germ rich in B and brewers yeast rich in G. Physicians who have attempted to make vitamin B additions to the infant's formula but who have been obliged to abandon this due to diarrhea or other unfortunate nutritional upsets, will welcome Mead's Dextri-Maltose with Vitamin B. This is a tested product with rich laboratory and clinical background and is made by Mead Johnson & Company, a house specializing in infant diet materials.

Not all infants require vitamin B supplements, but when the infant needs additional vitamin B, this product supplies it together with carbohydrate. In other cases, the carbohydrate of choice is Dextri-Maltose No. 1, 2 or 3.

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Pyelitis of Pregnancy*

T. J. SIMS, JR., M.D.†

For the past twenty years considerable interest has been directed to the etiology and treatment of pyelitis of pregnancy.

Insofar as this discussion is limited to the treatment of pyelitis of pregnancy, the subject may be sub-divided into various grades or degrees of the process—namely:

1. Mild pyelitis amenable to simple medical treatment.
2. Pyelonephritis.
3. Severe pyelitis which resists simple medical therapy.

In order to classify the discussion, reference first must be made to some facts concerning the etiology of the condition. Upon these facts the treatment is based. First, J. Hofbauer, in 1928, made extensive study of the etiology of this condition and found that in pregnancy the following process takes place: "Urinary obstruction in pregnant women is caused by certain anatomical conditions in the juxtavesical portion of the ureter and in the trigonum vesicae."

Hypertrophic changes in the musculature associated with hyperplastic changes in the connective tissue are essential factors in the narrowing of the lumen of the lower part of the pelvic portion of the ureter. The constriction is still further accentuated by an encircling ring resulting from hypertrophy of the ureteral sheath, while engorgement of the vessels in the mucosa and dextrorotation of the uterus may act as contributory factors.

There was no demonstrable indication of an active inflammatory process or of remnants of a preceding inflammation in the ureteral wall in the specimens examined.

A moderate degree of hydro-ureter is a common occurrence in pregnant women. The hyperplastic and hypertrophic changes in the upper pelvic por-

tion and in the abdominal portion of the ureter are less marked and the dilatation above the narrowed area of the juxtavesical portion occurs as a consequence of the structural peculiarities described.

Histological evidence tends to substantiate the occurrence of involution processes in the ureteral wall in analogy with the phenomena occurring in the uterus during the puerperium.

On cystoscopic examination, the entire region of the trigonum appears somewhat protruding and Mercier's bar particularly well marked. The recent studies of Hinman and Wasson emphasize the fact that recognizable urinary obstruction is favored by hypertrophy of the trigonum with a prominent plica ureterica which would explain the observation made by Curtis that "several ounces of residual urine is frequently demonstrable during pregnancy."

While there occurs after labor, a gradual return of the kidney pelvis to normal in uncomplicated cases, persistence of both bacteria and dilatation of the ureter were found on re-examination of cases complicated by pyelitis, in a considerable number of cases. Stricture may occur in cases of longstanding infection.

After Opitz's presentation in 1906, the majority of writers began to accept the theory that the condition is primarily due to compression of the ureter, particularly the right one, between the uterus and the brim of the pelvis, followed by a dilatation of the ureter above; while the concomitant infection is interpreted as of either hematogenous origin or due to an ascending process. More recently, however, we are abandoning the pressure theory, as many cases of pyelitis occur in the early months of pregnancy when the idea of such a mechanism can hardly be maintained; and as studies of frozen sections from pregnant women at term make such an idea untenable; and furthermore that DeLee has stated the specific gravity of the uterus is the same as that of the other abdominal organs and such a conception is incompatible with the laws of physics.

Duncan and Seng, in 1928, concluded that ureteral dilatation and stasis call for hyperplasia of the muscle of the

*Read before the meeting of the Wyandotte County Medical Society, at Kansas City, March 12, 1932.

†Department of Urology.

ureter and that the stasis is, in the main, due to pelvic crowding and congestion associated with physiological changes in pregnancy.

Hence, in view of the foregoing, our rationale of treatment should be directed towards improving drainage, combating infection already present, and building up the patient's resistance to prevent reinfection.

In the mild cases, simply increasing the fluid intake will so increase urinary output that the infection will be readily overcome by a washing out process. It is customary to add a urinary antiseptic to the therapy in order to insure the result. Of the urinary antiseptics, urotropine coupled with acid sodium phosphate, acriflavin, and the newer uretone have been most frequently used. In our own cases, we have used urotropine gr. XV, t.i.d., a.c. and h.s. and sodium acid phosphate gr. XV, t.i.d., p.c. Smaller doses of the urotropine do not seem efficacious. All cases require absolute bed rest both to conserve strength and increase resistance and perhaps in a measure to relieve pelvic congestion.

In the treatment of pyelonephritis, one must bear in mind that an actual kidney lesion is present and in addition to treating the infection, limit the diet frequently to liquids until the nephritis has improved. Glucose administration by the intravenous route seems to be the best diuretic which can be tolerated.

The severe type of case, not amenable to simple therapy, as just outlined, should be promptly treated by more strenuous measures. The sicker the pa-

tient, the more urgent the need for ureteral drainage by cystoscopy. Many urologists seeing such a patient feel that the patient is too poor a risk and will wait until too late. The time to act should follow immediately after a reasonable trial of medical treatment has been tried. Failure to act promptly on failure of medical treatment frequently will result in miscarriage with death to the immature fetus, and in many cases, death to the mother as well.

The therapy consists in cystoscopy by the Brown-Buerger method and the introduction of ureteral catheters into the infected kidney pelvis. A lavage is then done with a weak antiseptic such as 1 to 2 per cent mercurochrome or 1-1000 silver nitrate. Two methods of procedure may then be followed—either withdrawal of the catheter and subsequently repeating the process, if necessary, or removing cystoscope and leaving the catheters in place, fastening them to the groin with black silk thread and a short strip of adhesive. They may be allowed to drain into a basin or may be attached to a bed bottle by rubber tubing. The more severe cases seem to do best with the latter procedure with a lavage twice daily, using a weak antiseptic for flushing out the kidney pelvis.

The following cases represent only a part of our work on this condition but serve to illustrate the treatment:

CONCLUSIONS

The rationale of treatment in cases of pyelitis during pregnancy has been altered in the past five years through the

Name	Grav.	Symptoms	Side Affected	M. Gest	Therapy	Recov.
1. Mrs. S	3	Chills, fever 104	Left	7	Urotropine	5
2. Mrs. T	1	Chills, fever 102	Right	5	Urotropine	5
3. Mrs. H	1	Chills, fever 105	Right	6	Urotropine and Uretone	8
4. Mrs. L	1	Chills, fever 104 B. coli	Right and Left	6	Urotropine	7
5. Mrs. H	1	Chills, fever 102	Right and Left	4	Urotro. and Cysto.—single	7

(Cystoscoped. Brown-Buerger passed, ureters, catheterized with No. 5 cath. 5 per cent NaI injected. Bladder contained four ounces hazy urine. Blad. cap. 13 oz. Bladder mucosa clear. Capacity of left kidney pelvis 10 c.c. and right 100 c.c. Kidney function with indigo carmine on left 4 min. and 6 min. on rt. Heavy trace on left and faint on right. Flat plates: Angulation of rt. ureter at level of fourth lumbar.)

6. Mrs. M	2	Chills, fever 102 Anemia	Left	6	Urotropine and Cystoscopy Indwelling cath.	
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Case No. 6—(Cystoscopy: Brown-Buerger passed easily. No. 5 catheter passed into left ureter and immediately urine began to spurt—part was lost but 45 c.c. was recovered. Obstruction seemed to be in juxtavesical portion. Urethral catheter left and to be irrigated once daily with 1-1000 AgNO₃. The urine obtained showed 410 pus per cm.

excellent work of many workers in both urology and obstetrics.

The severe cases should have adequate urological treatment promptly, when medical measures fail.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

The value of procedures for putting the lung at rest in the treatment of tuberculosis is established. The several methods used are pneumothorax, interruption of the innervation of the diaphragm or the muscles of respiration, removal of portions of the ribs, the insertion of foreign substances or structures between the ribs and pleura, and intrapleural pneumolysis. Recently, a new measure, scaleniotomy, has been suggested for obtaining surgical rest of the lung. Abstracts of two articles on this subject follow.

Scaleniotomy—A Preliminary Report

Scaleniotomy is the division of the fibres of the scaleni muscles for the purpose of decreasing the motility of the upper chest. This procedure was advocated by Kochs, Els and Jungersdorf in October, 1930, and independently by Gale and Middleton in July, 1931. After their preliminary work the authors felt that they had established apical rest satisfactorily and that the procedure may be a valuable aid, either in conjunction with phrenic exaeresis, or when phrenic exaeresis has failed and some measure of a relatively conservative type is to be attempted before the patient is subjected to a more radical operation.

MECHANISM OF SCALENIOTOMY

The scaleni are three muscles (sometimes four) of the deep cervical group. They arise from the transverse processes of the third, fourth, fifth, sixth and seventh cervical vertebrae, and are inserted by tendinous bands into the first and second ribs. The scaleni provide anchorage for the first three ribs so that the intercostal group may function on them. Paralysis of the scaleni results in a caudad (toward the posterior) movement of the upper three ribs and exaggerated outward movement of the costal margins on inspiration. This tends to

immobilize the pulmonary apices.

Under local anaesthesia the scaleni are carefully dissected out and divided as near their insertions as possible. Injury to the subclavian artery and the lower cervical nerves must be avoided. (The surgical technic is clearly described by the author.) When the wound is closed there is a cavity about the size of a pigeon's egg, the severed edges of the muscle having retracted usually 1.5 inches. No bridging with muscle fibres was observed as late as six months after operation.

"The results obtained from phrenic exaeresis depend upon the changes in the relationship of one part of the diseased lung to another; and the relaxation and rest. The amount of improvement is not dependent entirely upon the height to which the paralyzed diaphragm rises in the thorax, although in the main this is so. Some improvement may usually be expected from phrenic exaeresis in lesions throughout the lung, especially in the lower three-fourths. In the more remote apical lesions, not so much improvement may be hoped for, and it is in these cases that scaleniotomy may be expected to change the anatomy, and the relationship of diseased parts to each other, and rest the area involved.

"In all our cases, as in the cases reported by Gale and Middleton, a marked reduction in the respiratory excursion, of the upper part of the chest was noted, due to decreased intercostal movement; and, when the combined operation was done, there was no increased upper intercostal movement, so often seen when the phrenic nerve alone is blocked or evulsed.

"When scaleniotomy is combined with phrenic exaeresis, upper as well as lower lung lesions may be expected to improve.

"When scaleniotomy alone was done, very little reaction occurred; three of the cases ran fever for one week, and in two the pulse-rate was increased for two weeks. No complication has occurred, nor has any deformity resulted. The results in these cases are based on their clinical records and clinical progress."

The results in a series of 52 cases were as follows:

Of 20 cases in which a phrenic exaeresis had been done previously, and in which improvement had stopped, ten were improved and ten not improved.

Of 29 cases in which scaleniotomy was combined with phrenic exaeresis, 19 improved and ten did not improve.

Of 3 cases in which scaleniotomy only was done, two improved definitely.

Scaleniotomy in the Treatment of Tuberculosis, Meade, Clyne, Am. Rev. of Tuberc., December, 1932.

Scaleniotomy As An Adjunct to Collapse Therapy

Fisher discusses the merits of the various methods of collapse therapy and comments on the results of 31 scaleniotomies done at Waverly Hills Sanatorium. Eighteen of these had had phrenic exaeresis from six months to three years previously without obtaining satisfactory contraction of the lesion. The remaining 13 patients were subjected to combined phrenicectomy and scaleniotomy. In every case the inspiratory elevation of the ribs in the upper portion of the hemithorax has been markedly reduced or eliminated as noted on inspection and fluoroscopic examination. By actual measurements in comparable x-ray films, the caudad drooping on inspiration showed as much as a 2-cm. narrowing in the upper hemithorax. "A downward pull on that side, accompanied by a sense of weight over the upper half of the chest, was voluntarily noted by practically every patient in the series. Cough and expectoration tended to show a moderate increase the first day or two, later subsiding or disappearing altogether. Likewise, moderate dyspnoea was temporarily noticed by a number of patients, as indicative of a transitory reduction of vital capacity. In the patients who had had a prior phrenicectomy these symptomatic effects could definitely be attributed to scaleniotomy alone."

Other favorable results noted include release of tension on cavity walls, the ability to sleep without being awakened by a strangling cough, ability to control cough, no recurrence of haemoptysis in two patients in whom it had been frequent before, normal temperature in one patient with fever of long duration. Re-

duction with clearing throughout the lesion was noted in several.

SUMMARY

The author summarizes as follows:

"Scaleniotomy affords a definite adjunct to collapse therapy and deserves consideration, along with phrenicectomy, in a certain proportion of cases.

"The effect is probably more nearly that of relaxation rather than of true compression, although a negative sort of compression is obtained by eliminating the upward, inspiratory pull exerted by the first and second ribs upon the apex of an adherent lung. Slight narrowing of the upper hemithorax has been shown.

"Striking improvement may be produced by scaleniotomy in a relatively short time, although progressive gains may reasonably be expected to continue over an extended period.

"In a series of 31 cases, some persistent cavities having lung tissue around them have been closed or markedly reduced in size within a very few weeks. Others which were subpleural have been definitely flattened by costal drooping.

"Symptomatic improvement begins immediately in most cases. Relief from cough and decreased expectoration have been consistent effects. Prevention of recurrent haemoptysis and rapid reduction of temperature to normal have been noted."

Scaleniotomy as an Adjunct to Collapse Therapy, Lincoln Fisher, Am. Rev. of Tuberc., December, 1932.

—R—

Pol N. Coryllos, New York (Journal A.M.A., Feb. 18, 1933), emphasizes the fact that the basic principle in the treatment of tuberculosis in all its forms is rest. More especially in pulmonary tuberculosis, complete and prolonged bed rest is advised in order to "immobilize the lungs" and "favor healing by fibrosis." During the past years, a number of surgical procedures have been adopted for reinforcing rest by mechanical splinting of the diseased lung, as pneumothorax, phrenic exeresis or thoracoplastic collapse. If for any reason conditions of anaerobiosis are created in a tuberculous area of the lung or of any other organ, tubercle bacilli could not continue to thrive and grow. The lesion will remain stationary and then regress; the amount of bacilli and their toxic products will rapidly decrease. The tubercle bacillus is a strict aerobe requiring large amounts of oxygen for continuation of life and growth. "Rest" and "collapse therapy" produce in the lung decrease or suppression of oxygen. The evolution of tuberculous cavities can be explained by the condition of their "draining bronchi." Development of fibrosis is closely related to anoxemia.

**LETTERS FROM A KANSAS DOCTOR
TO HIS SON**

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

Am glad to know you are comfortably located in Kansas City and must agree with you that there is some logic in your contention that you now need a car as you are forty blocks from the hospital. I have pondered over this problem considerably since you have called it to my attention and after a prolonged discussion with your mother we have arrived at what appears to us to be a fairly sane and happy solution of the situation. As we understand it the country is fairly well settled down there and you probably will have no great difficulty in securing a room within four or five blocks of the hospital. The ordeal of moving will not be strenuous as you can take your suitcase on the street car and no doubt some friend will volunteer to carry your golf clubs, pipes and cigarettes. Your consultation work will also be limited for a time. We are always glad to have you refer your problems to us and feel that once more we have solved the auto question for you. No doubt if an emergency existed we might be able to finance a cheap car. I would not fear the economic feature of the original deal so much as I would the problem of endowment.

Past observation has taught me that a car without endowment has been a very serious handicap to many impecunious young men. Besides your brother over at Lawrence who is compelled to struggle manfully two blocks back and forth to class rooms twice a day would feel he had been unjustly discriminated against should you be given a car. Speaking of student hardships I was very much interested in A. B. McDonald's article in the Sunday Kansas City Star a few weeks ago. I am wondering if you read this and fully appreciated the hardships some students go through in order to get an education. The lad who kept house and slept in the old Ford car and the fellow who marketed cock roaches in order to pay expenses excited my admiration. It is the first instance I have known of any one commercializing cock roaches

and best of all there are still plenty left for everyone. That these boys and girls are willing to sacrifice and economize in order to get through college must certainly raise them in the estimation of their fellow students and teachers. I think the greatest thrill I received from reading this article was the statement one student made, "And everyone treats me like a millionaire." I had one of my infrequent feelings of pride for the institution that would foster a spirit where the poor boy feels he is treated like an equal by others more favored. That kind of an institution and that kind of spirit is bound to encourage and inspire all who come in contact with it. And who can say these young people who are so financially cramped are not after all the fortunate ones? They most certainly appreciate the education acquired under such difficulties and make the most of their time and opportunities while too many of those more fortunately provided fritter away their time and talents.

At this writing we are shivering under a temperature of 23 degrees below zero or at least that is what our local thermometer records. We aim to have one that shows at least five degrees below actual temperature so as not to be outdone by envious neighbors. Next to a frank discussion of liver and kidney functions nothing offers better material for conversation than the excursions of the weather thermometer. It is the one topic that always thrills the old timer and even after memory becomes clouded he can refer to blizzards, tornadoes and hot winds with wonderful accuracy. Along this line I am carried back to my early days of practice in North Dakota in the old horse and buggy days. A temperature of 28 or 30 below zero was not uncommon and in making long drives across those northern prairies I dressed as do the present members of Byrd's Antarctic expedition. Even in the heaviest of wearing apparel and with a well functioning buggy stove it was very difficult to keep comfortable in the face of those winds that swept down from Canada. But being young and ambitious and with good circulation an occasional frosted ear or nose was about the only casualty.

However, it meant that many of my nights were spent in the homes of patients rather than risk the long drive back in a bad snow storm. And I must state the doctor was always welcome and entitled to the best in the house. Seldom was there a spare bed but there was always one that contained a tow headed boy or two who could be shoved out of his warm place to make room for the doctor. A familiar ammoniacal odor nearly always taught me to accept these hospitalities with fear and misgiving and long experience had shown me the nocturnal weakness of my juvenile bed fellows. Eugene Field has eulogized this frailty of youth in wonderful verse which no doubt you have read. You will escape these experiences as it seldom will be necessary to stay all night in the country. With high powered car comfortably heated there will be no actual physical discomfort. You will not have to alternately ride and lead a lunging horse through snow drifts up to his belly as I have done. All these things you will not have to go through, but I am wondering if you will get any more pleasure out of your work than did we of the older times. At any rate I am not wasting a great deal of sympathy on the man in general practice today.

I see by the papers your athletic authorities are quite disturbed at the conduct of the students during basket ball games. The booing and hissing of referees when making decisions against the home team is considered poor sportsmanship. Somehow I feel they are entirely right in this. In fact I would be tempted should I see you exhibit a tendency of this kind to take you by the ear and lead you out from among your moron partizans. The poor sap that cannot stand to see his home team defeated in any line of sport without frothing at the mouth will probably meet the problems of life with just as poor grace. So I would advise that when you or any of your friends find your frenzied partizanship becoming uncontrollable you may get relief by going over to Ninth and Walnut and stepping on the toes of a policeman. Have you ever noticed how

easy it is to control your temper when a flat foot is lounging near?

Remember this advice is backed up by experience. Be a square shooter in sports and be big enough to appreciate the ability of the other fellow or the other team.

Love,

DAD.

P. S.—I rather suspect your brother Dave at Lawrence has not learned of the 10 cent meals being served over there.

—R—

THE PHYSICIAN'S LIBRARY

OFFICE SURGERY. Fenwick Beekman, M.D., visiting surgeon, Bellevue Hospital; Visiting Surgeon, Hospital for the Ruptured and Crippled; Consulting Surgeon, Lincoln Hospital; Clinical Professor of Surgery, New York University and Bellevue Medical College. 94 illustrations. J. B. Lippincott Company, Philadelphia. Price \$5.00.

A very well written volume prepared rather for the general practitioner than for the surgeon, describing in detail with good illustrations the surgical conditions met with in office practice and the procedures for their correction. The importance of adequate treatment of the so-called minor conditions is stressed with reference to possible serious consequences. There is no attempt made to outline graver surgical treatment of diseases of the chest or abdomen. The chapters on fractures, dislocations and sprains are well written with especial emphasis on the emergency treatment only.

The book is beautifully bound, the print is large and easily read and the subjects are handled in a clear concise manner without excessive verbiage.—C.E.J.

ASTHMA, HAY FEVER AND RELATED DISORDERS. A Guide to Patients. Samuel M. Feinberg, M.D., F.A.C.P. Assistant Professor of Medicine and Attending Physician in Asthma and Hay Fever, Northwestern University Medical School; Attending Physician, Cook County Hospital. Lea and Febiger, Philadelphia. 124 pages, illustrated. Price \$1.50 net.

A very timely small book written in language that the layman can understand, with explanation of the entire subject of allergy. A very valuable little book and one that every allergic individual should read. The diagnosis, prophylaxis and treatment is explained as

well as details as related to foods and foreign proteins.—J.L.L.

CHILDREN'S TONSILS IN OR OUT. Albert D. Kaiser, M.D., Associate Professor of Pediatrics, University of Rochester Medical School; Chief Pediatrician, Rochester General Hospital; Pediatrician Rochester Dental Dispensary. Illustrated. J. B. Lippincott Company, Philadelphia and London. Price \$5.00.

This is a very excellent monograph on adenoids and tonsils. The chapters on physiology, bacteriology and pathology are particularly of value and have furnished me information better to explain to parents why their child's tonsils are causing trouble, even though the child gets along all right most of the time.

Every chapter has its value. The first impression may be there is too much reading matter but there is so much of value in all of it, and the information is so well arranged and presented, there is no labor in reading the book from cover to cover.—W.K.H.

CALCIUM METABOLISM AND CALCIUM THERAPY by Abraham Cantarow, M.D., Instructor in Medicine Jefferson Medical College; in charge of Laboratory of Biochemistry, Jefferson Hospital and Assistant Physician Philadelphia General Hospital. Foreword by Hobart Amory Hare, B. Sc., M.D., LL.D. Late Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College, Philadelphia. Price \$2.50, 252 pages. Lea & Febiger, Philadelphia, 1933.

A very complete and well written summary of the subject of calcium, its use, distribution, absorption in normal and abnormal individuals. The subject of vitamin D and its effect upon calcium absorption, the relations to other blood chemical changes, the relationship of the different hormones are discussed. An interesting chapter is devoted to the disturbances of calcium level and partition, dealing with the alteration of calcium in the different diseases. Also, treatment is covered in this book with special reference to the use of calcium in tetany.—J.L.L.

PRACTICAL OBSTETRICS for Students and Practitioners: P. Brooke Bland, M.D., Professor of Obstetrics, Jefferson Medical College; Chief Obstetrician, Jefferson Medical College Hospital, Philadelphia, Pa.; assisted by Thaddeus L. Montgomery, M.D., Associate in Obstetrics, Jefferson Medical College, Philadelphia, Pa. Illustrated with 516 engravings, including 21 colored plates. F. A. Davis Company, Philadelphia. Price \$8.00.

This book is 7 inches by 10 inches, of 730 pages, clear type, and unusual and excellent as regards the following: There are 516 excellent illustrations; there are many colored plates, some double sheet, portraying the correlation of ovarian function with the changes in the endometrium during menstruation and pregnancy; also the influence of the various hormones on the process of menstruation.

There is an excellent article on the biological tests for early pregnancy and, as well, on sterilization of a female; a very full chapter on disorders and diseases of the newborn; a very concise chapter on obstetrical jurisprudence, including some of the laws of the various states.

There is a section, not alone a bibliography, but a reference for general reading on twenty-five special topics, such as anatomy, physiology, pleural pregnancies, diseases of the ovum, anaesthesia, etc.

To me the illustrations alone are worth the price of the book.—W.H.W.

—————R—————

According to Arthur H. Curtis, Chicago (Journal A.M.A., Dec. 10, 1932), adhesions of the anterior surface of the liver are a not infrequent complication of gonorrheal disease of the fallopian tubes. These adhesions apparently develop during the acute stage of the pelvic infection. The differential diagnosis of pain in the right upper quadrant of the abdomen in women should include consideration of adhesions of the anterior surface of the liver. If the cause of the pain in the right upper quadrant is difficult to determine, a pelvic examination may serve to differentiate. Conversely, in the presence of a pelvic inflammatory mass of unknown etiology, a history of pain in the right upper quadrant, in the region of the liver, may be of material moment in the differential diagnosis of the etiology of the pelvic lesion.

PATRONIZE JOURNAL ADVERTISERS

RESOLVED by the Council of the Kansas Medical Society that the members of our society be urged to buy medicinals, instruments and other supplies from advertisers in our Journal in preference to similar articles sold by those who do not advertise.

The above resolution was adopted by unanimous vote at the mid-winter meeting of the Council, January 17, 1933.

THE JOURNAL

of the

Kansas Medical Society

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EDITORIAL

NEW RADIO SERIES

E. R. Squibb and Sons on January 8, presented the first of a series of half-hour radio programs in keeping with the traditions of its founder. This program is on the air each Sunday afternoon at 3:30 over the red network of the National Broadcasting Company. It features Frank Black and his orchestra, the Revelers, and as the high spot a dramatization of gripping moments from the history of medicine.

These presentations of music and interesting dramatic episodes are designed to appeal to every type of radio listener. The announcements emphasize that only through a sufficient number of properly trained physicians can a community meet its responsibility for the care and prevention of illness and the protection of health. Impressive reasons are given as to why the use of the family physician

is a good way to keep down the costs of competent, sympathetic and understanding general medical care.

Invite your patients to listen to this most interesting program.

MOTTLED ENAMEL

Mottled enamel has been a subject of investigation for many years. Passed Asst. Surg. J. M. Eager of the United States Public Health Service, stationed in Naples, Italy, described the condition in an article which appeared in *Public Health Reports* in 1901.¹ Doctor Eager detected the condition among Italian emigrants, particularly those from Pozzouli, a community about five miles from Naples. The defect was called "Denti di Chiaie," after Professor Stefano Chiaie, who was the first to describe the condition. From the description given by Doctor Eager it was recognized the same enamel defect was prevalent in certain areas of the United States and other countries. Further information, however, was not available until 1916 when Doctors G. V. Black and Frederick S. McKay published a series of joint articles on the subject in *Dental Cosmos*. Black and McKay were the first in the United States to make an exhaustive study of the defect and to publish their results. The term "mottled enamel" was first used by Black.

Studies of the occurrence of mottled enamel in Kansas have been made by the Division of Sanitation of the state board of health for the past four years. The reason for such studies was to determine, if possible, the relationship between this dental defect and the source of the drinking water supply and also as to the prevalence of the defect in the state.

Mottled enamel is a defect of the permanent teeth, and manifests itself by a

1. Nov. 1, 1901. pp. 2576-2577.

chalky white spotted appearance of the enamel instead of the normal translucent appearance. It is noticeable as soon as the tooth erupts into the mouth, but since the defective chalky white enamel is more liable to staining than the normal enamel, discoloration soon occurs and the teeth may become disfigured with areas shading from buff to dark brown. Mottled enamel is rarely found on any of the temporary teeth. A few cases have been observed in which there was a slight flecking of the typical white spots on the enamel of the temporary molars, but the brown stain has never been observed.²

Recently the fact has been established that mottled enamel results from the presence in the drinking water of comparatively small amounts of the chemical element fluorine. The presence of fluorine in the water supplies of certain affected communities was first reported by H. V. Churchill of the Aluminum Company of America at the meeting of the American Chemical Society in the spring of 1931. The Smiths and Lantz at the University of Arizona reported they had produced mottled enamel in white rats by the addition of the fluorine salt to the diet and had obtained the same result by using a concentrate of the water supply from a community in Arizona where mottled enamel was endemic.³ Smith and Smith report the evidence indicates that waters having a fluorine concentration varying from 2.0 down to 0 p. p. m. do not interfere with normal development of the enamel to the extent of causing observable mottled enamel.⁴

Fluorine exerts its effect while the enamel is in process of formation. The enamel of the permanent teeth is formed during childhood, therefore is subject to injury from fluorine containing waters. The enamel cannot repair itself and con-

sequently the injury is a permanent one. On the other hand, if the enamel is formed while a child resides in a community not afflicted with mottled enamel, the defect apparently will not develop if change of residence is made to a community using fluorine-containing water.

The damage to the enamel is so great dental science has not as yet developed a method of repair. Apparently, the affected teeth are more liable to decay than normal teeth and when a cavity appears in such teeth the dentist experiences great difficulty in making a filling hold on the defective enamel.

There are at least four areas in the state where mottled enamel is definitely endemic: Chetopa, Utica, LaCrosse and Bazine. The city water supply at Chetopa is obtained from two deep wells (one 8 inches in diameter and 1,100 feet deep, the other 6 inches in diameter and 1,240 feet in depth). In the other communities, the water is obtained from two sources: shallow and deep wells. The water from the shallow wells is usually hard, but is not always available in adequate quantity and consequently deep wells are drilled into the Dakota Sandstone. This source is usually abundant and fairly soft, but highly mineralized and in certain localities contains fluorides.

Through the cooperation of practicing dentists in the four communities, surveys were made of the occurrence of mottled enamel in the school children. It was determined among the Chetopa children where 182 pupils were examined, that 69 were afflicted with the mottled enamel defect. In each case, every individual of the afflicted group gave a history of having used since childhood, the city water which contains fluorides. On the other hand, it was found that the 113 children having normal teeth had used other water supplies during childhood, or had

2. P.H.R. No. 48, Nov. 28, 1930.

3. U. of Ariz. Tech. Bull., No. 32, June 10, 1931.

4. U. of Ariz. Tech. Bull., No. 43, July 15, 1932.

moved to Chetopa and begun use of the city water supply after eruption of the permanent teeth. The results of the survey in the other three communities were similar to that in Chetopa.

To date, the Division of Sanitation through the Water Laboratory has completed fluorine determination on water samples from 88 city supplies and three have been found to contain more than the 2 p. p. m. of fluorine set by the Arizona workers as the upper limit for absolute safety from mottled enamel. The fluorine content of additional supplies will be determined as time permits.

The only hope for the control of mottled enamel is prevention, rather than its cure. The cause being known, it is now possible to definitely state the defect may be completely prevented by changing to a water supply containing little or no fluorine. In a community where the water contains more than 2 p. p. m. of fluorine this change should be made for every child who does not have his complete set of permanent teeth, and should include not only the drinking water but also the water used in the preparation of the food. If the enamel of some of the teeth has already formed, the change will benefit only those teeth whose enamel has not yet been laid down.

PRINCIPLES AND POLICIES OF MEDICINE

Dr. William A. Pusey in his discussion of "The Principles and Policies of the Medical Profession in Its Public Relations"* stated medicine in effect is the trustee of society in matters relating to disease and injury. Its policies, therefore, must always be governed by this fundamental fact. Medicine, is responsible for the conduct of one of the most important of civilization's material interests. To fulfill this obligation, medi-

cine must attract the best men and its services must be available to all.

Medicine is a business. Business in controlling medicine subjects it to lower standards by placing it on a competitive basis, the purpose being to secure medical services at the lowest rates possible.

Medicine has three definite responsibilities: (1) to perform the service of the practice of medicine; (2) to promote preventive medicine and the public health, and (3) to foster research and increase knowledge. Medicine's concern about its own affairs must be for the individual physician because the competency of the profession as a whole depends upon competency of the individuals who compose it.

Medicine does not offer wealth; that primarily is not the objective of the physician. The physician, however, has the right to ask that medicine may hold out to him, if reasonable success be obtained, material comforts for himself and his family that only a liberal competency can provide. To attract to it the types of men it needs, medicine must offer this prospect.

Organization is necessary, in order that medicine may use its united strength in meeting its responsibilities. The policies must be intelligent; devoted only to the interests of the profession which are in accord with sound policies. It must be capable of change in its policies, as changing conditions indicate the wisdom of such action.

Governmental practice takes away freedom of opportunity and, by encouraging quantity practice, tends to lower the quality of practice. There are overwhelming objections to any type of practice which interferes with the free choice of a physician on the part of the patient. Corporation practice should conform to the methods and traditions of conduct

*Bull. A.M.A., December 1932.

expected of reputable individual physicians.

Dr. Pusey summarized the principles and policies as follows:

Principles: 1. Medicine is the trustee of society in the care of the sick and injured; its policies must always be governed by this fundamental fact.

2. The good of society must be the sole aim of its public policies and the good of the patient the first consideration in the relations between physicians and patients.

3. Medicine's first responsibility must be to see that its services are available to all men.

4. The public interest demands the most competent medical profession possible. Medicine must be an attractive profession to compete successfully with other professions for the ablest young men.

5. In the sense that every calling from which a living must be gained is a business, medicine is a business; it must accept the competitive conditions of practical life but, as a profession of high ideals, it must seek to prevent selfish commercialism.

6. Experience has shown that the vast majority of disease conditions afflicting man can be most satisfactorily and economically diagnosed and treated by a competent individual general practitioner.

Responsibilities: 7. The services of medicine include (a) the practice of medicine; (b) the promotion of preventive medicine and the public health; (c) the fostering of research and the increase of knowledge.

8. Medicine's chief concern must be for the individual physician; the service rendered by individual physicians in the aggregate constitutes the great bulk of medical service. The quality of service

which is given depends on the competency of the individual physicians who give it.

Rights: 9. The medical profession asks for its practitioners: freedom of opportunity to develop to the limit of their individual capacities.

10. It asks a career of independence under conditions of free and dignified competition.

11. It asks remuneration sufficient for reasonable comfort for the individual and for his family.

12. In its ideals of independence, medicine has a right to control its own affairs. Its history of capacity and altruism justifies this claim.

EDITORIAL COMMENT

Post and Cooney summarize the literature on the accidental transmission of syphilis by blood transfusion and report a case. (*Jour. A.M.A.*, Jan. 28, 1933. pp. 258-59.)

Anderson describes the removal of a tattoo mark through the injection of 50 per cent tannic acid solution and the application of pure stick silver nitrate. (*Calif. and West Med.*, Feb. 1933.)

At a called meeting of the Executive Committee held in the Journal office in Topeka, February 28, publication of *FOLKS* was suspended with the March issue and subject to final action by the House of Delegates.

Studies made at the Rocky Mountain spotted fever laboratory have proven that tularemia may be transmitted through the bite of a mosquito, although the part played by the insect in carrying the disease is purely mechanical.

The Federal Food and Drug Administration caused the seizure in January of 84 consignments of food and drugs found to violate the national pure food and

drug law. One seizure was of 969 dozen tubes of catgut ligatures. The ligatures were alleged to be sterile, but examination proved that a part of the consignment was not.

An *Associated Press* dispatch under date of February 6 states Lester J. Tilton and Harry de Joannis, who formerly operated a cancer clinic at Clinton, Iowa, and claimed cures by their application of a black paste, were sentenced to prison terms of one to five years and fined \$2,000 each, in the court of Judge Rudolph Desort in Chicago.

The Commonwealth Fund has sponsored a state wide study of lobar pneumonia in Massachusetts. The study was undertaken in January 1931, and will continue for five years. The purpose as originally outlined was to make available to all cases of lobar pneumonia the benefits of prompt clinical and bacteriological diagnosis and early treatment with anti-pneumococcic serum.

F. J. Cullen gives a rough outline of the work of the federal Food and Drug Administration in connection with food and drug products that are especially interesting to the physician. He emphasizes the care that is exercised in attempts to assure the physician of potent drug products for use in his practice, and points out the protection attempted to afford the layman against fake "patent medicines." (*Jour. A.M.A.*, January 28, 1933.)

During a period of nineteen years, 37 cases of primary malignant tumor of the foot were observed among a total of 10,495 cases admitted to the State Institute for the Study of Malignant Diseases (New York). In these 37 cases, melanotic sarcoma was most common. Seventeen of the lesions fell into this category, 10 of which were on the sole or heel of the foot. Squamous cell carcinoma of the

skin was noted in 8 instances; sarcoma of the soft tissues, 6; bone sarcoma, 4; adenocarcinoma, 1 and basal cell epithelioma of the skin of the foot, 1.

The Council on Medical Education and Hospitals has recently circularized superintendents of hospitals registered by the American Medical Association as well as presidents of colleges approved by the Association in regard to an announcement of the Illinois College of Physicians and Surgeons which includes the following statement: "Courses offered and requirements for graduation are class 'A' requirements." The letter calls attention to the fact that the Council on Medical Education and Hospitals is the only body which has ever rated medical schools as class A, and it could be implied the above named school conforms to the standards prescribed by the Council. Such an inference is wholly unwarranted, as the "institution is conducted by a group of chiropractors and does not even remotely approach the standards of a class A medical school."

The recent discussion in the Letter Box column of *The News* on the paying of doctor's bills lends peculiar interest to the action of the Atlanta physician who burned his account books representing \$81,362 due him and told his patients to start all over again. Not all doctors are financially able to do that; obviously Dr. Brown of Atlanta is able, else he would have kept the books with a hope of collecting something sometime. Therefore his example should not be used to embarrass the hundreds of unselfish and faithful members of the profession who, whatever their patients may think, must collect their fees to pay rent, taxes, assistants, and all other ordinary expenses. Scarcely one of us but can recall an instance of self-sacrificing loyalty by doctor to patient. The doctors earn what they get, even if they do not get what they earn. (*The Detroit News*, December 5, 1932.)

PROPOSED LEGISLATION

S. 52—Passed Senate February 10. House Committee on State Affairs amended levy to one-twentieth, and balance of funds remaining be returned to general fund, and bill be passed as amended. On General Orders, March 1.

S. 146—Annual registration of nurses. Passed Senate on February 13.

S. 174—Committee on Public Health recommended bill be not passed.

S. 181—Passed the Senate, March 2.

S. 195—In Committee on Assessment and Taxation, March 2.

S. 213—Committee on Public Health recommended bill be passed. On General Orders, March 3.

H. 3—Passed House, February 7. In Senate Committee on Public Health, March 2.

H. 6—Passed House, January 20. Passed Senate as amended, February 20. House accepted amendment on February 27. Approved by Governor Landon, March 6.

H. 74—Committee on Education recommended bill be not passed.

H. 110—Committee on State Affairs recommended bill be not passed.

H. 111—In Committee, Cities of Second Class, March 2.

H. 153—Committee on Hygiene and Public Health recommended bill be not passed.

H. 181—In Committee on State Affairs, March 1.

H. 198—Passed House on February 6.

H. 295—Passed House, February 6. Senate Committee on Education recommended bill be not passed.

PROPOSED LAWS INTRODUCED SINCE FEB. 3

S. 238—Senator Friend. Authorizes any city of the second class to levy an annual tax of not to exceed .5 mill for

the support of a hospital acquired in accordance with R. S. 12-1615, and if city becomes city of first class, levy may be continued. (In Committee, Cities of Second Class, March 1).

S. 239—Senator Todd. Provides that in the distribution of the funds of a decedent's estate, hospitalization expenses during the last illness and funeral expenses shall have priority over all other claims. Claims on account of medical services are to be subordinate to the claims above noted but are to be coordinate with wages due servants and the expense of administration and precede all other claims. (Committee on Judiciary recommended amendment in first claim "court costs not to exceed \$25" and funeral expenses "not to exceed \$150," and then bill be passed). On General Orders, March 1.

S. 272—Senator Skovgard. Provides cities of the first and second class and school boards of school districts at their option may provide for free dental inspection annually for all school children. (Committee on Education recommended bill be not passed).

S. 291—Senator Logan. Provides that jury of four with one physician shall hear insanity cases; person in question must be present. Provides *unless such insane person be a minor and have a competent natural guardian residing in this state, the court shall appoint a guardian of the person of such insane person, which guardian shall serve without bond.* (Committee on Judiciary recommended the bill be passed). Passed the Senate February 27. In House Committee on Judiciary, March 1.

S. 292—Senator Logan. Provides for sterilization of certain persons in state, penal and correctional institutions when the superintendent certifies to the governing board and provided notice has been served on such inmate and his or her natural or appointed guardian of the time and place of a meeting and hearing at least thirty days prior thereto. (Committee on Judiciary recommended bill be passed). Passed the Senate, February

27. In House Committee on Judiciary, March 2.

S. 302—Senator Todd. Provides repeal of the law relating to county asylums and bond issues in counties of over 110,000 population. (Committee on Federal and State Affairs recommended bill be not passed).

S. 314—Senator Warren. Raises the statute of limitations from three to fifteen years. (Committee on Judiciary recommended bill be not passed).

S. 394—Senator McCarthy. Provides for a tax of one mill for the care and hospitalization of the poor in cities of the second and third class. County commissioners or commissioners of cities empowered to aid in support of any hospital owned or operated by any city or other municipality or charitable or non-profit corporation which will receive and care for without charge and extend charitable aid in the medical or surgical treatment of indigent persons. (In Committee on Assessment and Taxation, March 2).

S. 417—Senator Todd. Provides in counties with a population of more than 110,000 population and less than 135,000, coroner shall not be elected, but duties shall be performed by sheriff or one of his deputies. (Committee on Federal and State Affairs recommended bill be not passed).

S. 458—Senator McDonald. Provides no patient shall be admitted to any dispensary of the University of Kansas school of medicine, unless he is certified by a qualified doctor of medicine as being unable to pay for medical services. No charges whatsoever shall be made to any resident of the State of Kansas who is thus admitted for any services including investigative or therapeutic. (In Committee on Public Health, March 3).

S. 465—Senator Stauffer. Provides any person applying for a marriage license must file with the probate judge certificate issued by a legally qualified and licensed practitioner of human medicine of the State of Kansas, that applicants have been examined by him within

the next preceding 30 days and found free from mental and venereal disease. (Committee on Judiciary recommended bill be not passed).

S. 498—Senator Bateman. Provides for annual registration of doctors of medicine with the secretary of the board of medical registration and examination; annula fee of one dollar. Also provides representation on board of different schools of practice to be as nearly possible in proportion to their numerical strength. (In Committee on Public Health, March 2).

S. 548—Senator Benson. Provides local health officers shall not make inspection of school buildings, grounds, or of the public health of the children except upon request of the local school board. (In Committee on Public Health, March 2).

H. 319—Mr. Blood. Empowers counties of more than 110,000 population to construct, maintain and operate a county hospital for care and treatment of indigent sick; any physician or surgeon licensed to practice medicine in Kansas or any dentist regularly licensed, be permitted to treat such patients. (Committee on State Affairs recommended "practitioner" be substituted for the word "physicians"; and hospital treatment be substituted for "medical or dental attention," and the bill be passed). On General Orders, March 2.

H. 349—Mr. Sargent. Same as S. 239. (Committee on Judiciary recommended amendment funeral expenses not to exceed \$150 and bill be passed). Passed the House, February 21.

H. 431—Companion bill to S. 498. Passed the House on February 21. Senate Committee on Public Health recommended bill be passed. On General Orders, March 3.

H. 467—Mr. Cox. Allows no revocation of hospital permit from approved list by the Crippled Children's Commission unless a hearing is had. (In Committee on State Affairs, March 2).

H. 472—Mr. Robinson. Prohibits of-

fering for sale or selling any medicine, drug, or poison by means of a vending machine. (On General Orders, March 2).

H. 517—Dr. Blount. Amends the laws relating to the practice of dentistry by providing for "dental hygienists," for registration, license fee and rules and regulations governing them. (On General Orders, March 2).

H. 519—Committee on Hygiene and Public Health. Provides that in the event immediate sterilization be deemed advisable (of certain patients confined in state institutions) in order that the patient may be paroled or discharged without unnecessary delay, and a request to this effect signed by the patient and the guardian is presented to the superintendent, said operation may be performed without waiting for a regular meeting of the board. (Passed the House, February 20). In Senate Committee on Public Health, March 2.

H. 533—Mr. Riegle. Provides that any hospital supported in part or in whole by a city, county or by public funds which can secure the services of a specialist in the line of practice needed shall be approved by the Crippled Children's Commission. (In Committee on State Affairs, March 2).

H. 629—Mr. Hayes. Permits regularly licensed physician to prescribe liquor for medicinal purposes and pharmacist to fill such prescription. (Committee on Judiciary recommended bill be not passed).

H. 728—Committee on Hygiene and Public Health. Provides that licensed practitioners of certain professions affecting the public health, must use their professional degree after their name if the term "Doctor" is used. (On General Orders—Committee of the Whole—March 2).

H. 740—Committee on Hygiene and Public Health. Relating to the practice of medicine and surgery and the healing arts in tax exempt hospitals in the State of Kansas.

Section 1. From and after the passage of this act, all persons licensed to practice

any of the healing arts under the laws of the state of Kansas, are hereby authorized to practice such profession in any tax exempt hospital in the State of Kansas: Provided, That this act shall not be construed to permit the practice of medicine or surgery or the healing arts by any physician, surgeon, osteopath, or chiropractor or any person not duly licensed to so practice.

Sec. 2. Any person in charge of a tax exempt hospital within the state of Kansas, or any member of a governing board of such hospital who refuses to permit a doctor licensed to practice his profession in such hospitals, shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined in a sum not less than \$50.00 and not to exceed \$500.00, or by imprisonment in the county jail not to exceed six months, or by both such fine and imprisonment.

(Second reading, Committee of the Whole, March 2).

B BOOTLEG MILK

Purity of milk supply, sometimes taken for granted, is becoming questionable under present conditions, with farmers in some sections bootlegging raw or improperly pasteurized milk into cities. (See editorial J.A.M.A. Nov. 5, 1932).

This is particularly unfortunate, as every physician knows, in respect to infant feeding.

Since 1921, when S.M.A. was first offered to the medical profession, it has been made only from fresh milk of the highest grade from an accredited dairy area where all herds are tuberculin tested under state and government supervision and where all farms are under complete farm inspection, in accordance with standard dairy requirements. In addition to the high standards of the district, S.M.A. Corporation enforces its own standards which are still higher.

Purity of milk supply is just as important as ever, but appears to be in danger of being overlooked. This purity is one factor which causes S.M.A. to produce excellent nutritional results more simply and more quickly.

Physicians who prescribe S.M.A. for their patients know that the purity is unquestionable, beside the fact that S.M.A. is the closest approximation of nature's own formula for the human infant both chemically and physically.

It is simple to prescribe, simple for the mother to prepare and produces exceptional nutritional results in most cases.

THE LABORATORY

Edited by

J. L. LATTIMORE, M.D., Topeka

The Early Diagnosis of Pregnancy

In an effort to present a simple concise article on the laboratory diagnosis of pregnancy, which will be easily understood, at least the theory and principle must be explained. Experimental data has been presented in numerous volumes dealing with the removal of the whole or a portion of the pituitary gland. Early, some investigators were of the opinion that removal of the entire gland did not result in death. In the past few years it has been very definitely demonstrated that removal of the entire gland does result in death; removal of the posterior lobe leads to no special disturbance but removal of the anterior lobe leads to death. This death may be delayed in experimental animals but the span of life is much shorter than in the control animals which have not had their anterior lobe removed.

The basis for the Friedman, the Ascheim-Zondek and other hormone of the anterior pituitary lobe tests is that the anterior lobe is stimulated by pregnancy to secrete a hormone which is passed through the urine. The urine containing this hormone, when injected into young female mice or rabbits will produce typical corpus lutea and corpora hemorrhagica in the ovaries.

Instructions to the patient should be to collect a morning specimen, voided, and send at once to the laboratory. The Ascheim-Zondek test is the use of young female mice weighing five to eight grams. The Friedman test is the use of young female rabbits from twelve to fourteen weeks of age. The specimen is centrifuged or filtered and then slowly injected. With the mice, injections are made under the skin of the back and as a rule five mice are injected, using .2 c.c. in the first mouse, .25 c.c. in the second, .3 c.c. in the third, .35 c.c. in the fourth and .4 c.c. in the fifth. On the fifth day following the injections, the mice are killed and the ovaries examined. In my experience I

have found the Friedman test to be more practical. First because the ease of injecting the urine into an ear vein, an earlier diagnosis can be made and rabbits in Kansas can be secured more quickly. The Friedman test is carried out as follows, 10 c.c. of the centrifuged or filtered urine is injected into a marginal ear vein. It is not necessary, but a very safe procedure is to inject a second specimen the next morning. The rabbit is killed and examined 48 hours after the first examination. Ovaries will show typical changes if the patient is pregnant.

The diagnosis can be made very early in pregnancy; many cases have been reported where the woman was not more than two weeks pregnant. The accuracy is about 98 per cent, which in the laboratory is a high degree of accuracy.

The practical application aside from the field of obstetrics, is rather wide and of importance. In surgery, the surgeon is often confronted with the patient that desires a hysterectomy for fibroids, concealing the history of pregnancy; then there is the case of associated pregnancy with fibroids. In general medicine, such clinical cases as tuberculosis should not be permitted to go forward with a pregnancy and an early diagnosis is desired. The test is positive in cases of hydatidiform mole and chorioepithelioma and in these conditions the test has been used as a check to determine if living placental tissue remains, the test becoming negative when living placental tissue is not present.

In securing rabbits for the test it is very important that they should be isolated from the buck for at least one month. If desired, examination of the ovaries of the injected animals can be made, the wounds closed and the same rabbits used again in five weeks.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

EXOPHTHALMIC GOITER

Thompson in his summary states there has been a tendency in many quarters to attribute the peculiar nervous manifestations of exophthalmic goiter to an abnormal thyroxine. Examination of a large number of patients over a long period of time has suggested that the nervous manifestations of the disease which may be grouped under the general heading of emotional instability, may be accounted for in a simpler manner. It appears that most patients who develop exophthalmic goiter were emotionally unstable before the development of the disease; that when the disease develops, all reactions that occur are merely exaggerations of reactions that previously were present in less intense form; and that when thyroidectomy restores the basal metabolic rate to normal, the patients themselves are merely restored to their former state of emotional instability. However, fairly calm and apparently stable individuals sometimes get the disease, possibly because the cause is acting with great intensity and susceptibility is merely relative. It appears that the degree of emotional instability that is present in the disease depends largely upon the degree of emotional instability that was present before its development. The writer concludes that the peculiar nervous manifestations of exophthalmic goiter appear to be satisfactorily explained as exaggerations of the customary reactions of the patients, who are usually of the emotionally unstable type.

The Nervous Manifestations of Exophthalmic Goiter at Different Stages in the Disease; Thompson, Willard Owen: *Endocrinology*: 16:487-491, September and October, 1932.

DOCTORING THE BOWELS

Doctor Brown, who is associated with the Division of Medicine at the Mayo Clinic, presents a hypothetical history of a woman who he says is quite typical of many he sees whose chief complaint is stomach and bowel trouble. By the first

doctor to whom she went she was persuaded to submit to an operation for straightening the uterus, then, to an appendectomy. She was suspected of having gall bladder symptoms and adhesions. She went through treatment for hemorrhoids. Later the question of possible focal infection was raised and a tonsillectomy was performed. Further investigation resulted in a diagnosis of chronic colitis and in consequence a succession of diets were recommended; following the diets colonic irrigation was invoked and throughout the whole history there are many repetitions of roentgenologic study.

The doctor presents this hypothetical story suggesting that there is good reason for criticism on such an occasion of the medical profession, and regards it as the end result of doctoring the bowels. He thinks that the diagnosis in the general group of such cases is that of functional intestinal disturbance associated with a state of physical and nervous exhaustion. He believes that even in medical school the undergraduate is unwittingly taught organic diseases at the expense of a broader and more sympathetic appreciation of emotional and nervous problems.

Doctoring the Bowels. Brown, P. W. *Proceedings of the Staff Meetings of the Mayo Clinic*. Vol. 7:651-654, November 9, 1932.

STANDARDS OF NORMAL IN GASTRIC SECRETION

Alvarez presents data which has been published and which throws light on the size of the daily variation in gastric acidity and on the reliability of one gastric analysis. In some persons the variation is so large that little value can be attached to figures obtained from one test meal. A figure is published which shows the range and central tendency of measurements of gastric acidity for men and women at five yearly intervals from youth to old age. The mean acidity of men during middle life is about 15 points higher than that of women. The percentage of persons with anacidity, after an Ewald test meal, increases steadily from youth to old age. The bimodal distribution curves representing total acidity in the various age groups suggest

that there are two varieties of the human race: one with a tendency to maintain free acidity in the stomach, and the other with a tendency to lose it. The curves representing mean free acidity in men and women from youth to old age are raised about 12 points but otherwise are unchanged by ulceration in the duodenum. Persons with nervous temperament commonly have pepsin values from fifteen to twenty times the normal.

Standards of Normal in Gastric Secretion, Alvarez, Walter C.: *Annals of Internal Medicine*, 6:314-319, September, 1932.

BRAIN IN RHEUMATIC FEVER

Winkelman and Eckel describe five cases of rheumatic infection with clinical histories and physical findings typical of that infection. The authors draw the following conclusions, first that acute rheumatic fever does not produce in the brain a specific change that can be recognized either grossly or microscopically. The changes that are present in the brains of patients who have shown neurologic and psychiatric symptoms during the course of acute rheumatic fever are similar in every way to the changes that occur in any other acute infection and toxemia. The role that edema of the brain plays in the production of symptoms of so-called cerebral rheumatism has probably been greatly underestimated. Unless relieved, the authors feel, a vicious circle may be initiated. The endarteritis of the small vessels, which has been found in every case, has probably two causations: (a) purely mechanical, as the result of edema of the brain; (b) toxic irritation through the blood stream. Areas of Verodung, or acellular areas, in the brain are found frequently in the cases of acute rheumatic fever, as they are in other infections and toxemias, and may produce a permanent clinical picture if sufficiently numerous. The occurrence of endocarditis can completely change the picture in the brain. The effect of embolic phenomena must be kept in mind. Purpura of the brain is a possibility, and may give evidence of its occurrence by similar lesions in the skin.

The Brain in Acute Rheumatic Fever: Nonsuppurative Meningo-Encephalitis Rheumatica, Winkelman,

N. W. and Eckel, John L.: *Archives of Neurology and Psychiatry*, 28:844-871, October, 1932.

PERICARDITIS

Cases in which the amount of pericardial fluid was more than normal, or in which the fluid, irrespective of its amount, was altered in character, were selected for this study. One hundred and thirteen cases of pericarditis with effusion in which necropsy was performed at the Mayo Clinic were studied with special reference to correlation of clinical and pathologic data. These cases were grouped according to the character of the effusion as follows: (1) acute purulent pericarditis, (2) fibrinous pericarditis with effusion, (3) tuberculous pericarditis and (4) noninflammatory effusion. A distinct predominance in males occurred. Infections were the causic factors in 111 cases (98.2%). Intrathoracic infectious disease occurred greatest frequency. Infectious processes elsewhere in the body occurred in 31 cases (27.4%). Only two cases (1.8%) were found in which infection was absent; both of these cases were examples of primary cardiac disease with congestive failure. From this study it appears to be established that the presence of infectious intrathoracic disease offers a great chance of the pericardium being involved, and when infectious processes of the body as a whole are considered, the chance of pericarditis is still greater. Fluid was present in one or both pleural cavities in 83 cases (73.5%). This observation may be applied as an accessory diagnostic sign that favors the probability of the presence of pericarditis. Death resulting directly and solely from heart disease occurred in only 8.8 per cent of the cases; from sepsis, in 77.9 per cent, and from other causes, in 13.3 per cent.

(Pericarditis: III. Pericarditis with Effusion; Smith, Harry L. and Willis, Frederick A.: *Archives of Internal Medicine*: 50:192-203, August, 9132.)

—R—

M. H. Streicher, Chicago (*Journal A.M.A.*, Nov. 19, 1932), observed that, in a series of 102 cases, histamine is a marked gastric acidity stimulant; that 7 per cent alcohol is a substantial gastric acidity stimulant; that histamine is apparently extremely toxic in man (0.05 mg. for each 10 Kg.); that 7 per cent alcohol is not toxic in man, and that it seems advisable to discontinue the use of histamine diagnostically.

COUNTY SOCIETY NEWS

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society met Thursday evening, February 16, at the Municipal Hospital in Clay Center. Dr. Arthur L. Osborne of Kansas City, Mo., spoke on "Renal Tuberculosis" and Dr. Ralph Mueller, also of Kansas City, discussed "The Maggot Treatment of Infections."

W. H. ALGIE, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The Shawnee County Medical Society met in monthly session at the Hotel Jayhawk, February 6; President Hall presided.

Dr. Donald R. Black, of Kansas City, Mo., was the guest speaker and discussed "Hypertensive Heart Changes, Coronary Occlusion and Electrocardiography." With his discussion, the speaker presented a moving picture on electrocardiography from the Lehey Clinic, Worcester, Mass., Dr. Black stated important points in the treatment of coronary disease included: 1. correct diagnosis; 2. keeping the patient absolutely quiet; 3. small doses of quinidine; 4. epinephrin, or ephedrine (the latter intravenous), and 5. do not use insulin.

Visiting guests included: Dr. J. B. Carter, Wilson; Dr. E. L. Morgan, Phillipsburg; Doctors W. A. Carr and W. A. Smiley, Junction City, and Dr. F. Campbell, Kansas City, Mo.

EARLE G. BROWN, M.D., Secretary.

WILSON COUNTY MEDICAL SOCIETY

The Wilson County Medical Society held its regular February meeting at the Brown Hotel at Neodesha at 6:30 p.m., February 20. Payment of 1933 dues was accomplished painlessly and satisfactorily. Dr. J. M. McGuire had charge of the program, which consisted mainly in extemporaneous talks on fractures.

We held no meetings in December account the Southeast Kansas meeting at Parsons December 9th and we skipped the January meeting account the preval-

ence of flu. At our November meeting election of officers for 1933 was as follows: O. D. Sharpe, Neodesha, president; A. C. Flack, Fredonia, vice president; E. C. Duncan, Fredonia, secretary and treasurer, and F. M. Wiley, Fredonia, delegate to state meeting.

Dr. W. H. Young of Fredonia will read a paper at the state meeting. We have one new member to report, Dr. H. E. Morgan, who recently located here. Dr. Morgan is a K. U. graduate and recently interned at St. Luke's, Kansas City.

Dr. Frank Moorhead, son of Dr. and Mrs. J. L. Moorhead, was a guest.

Our next meeting will be in March at Fredonia.

E. C. DUNCAN, M.D., Secretary.

—B—

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

The state meeting of the Kansas Medical Auxiliary will be held in Lawrence this year on May 2, 3 and 4. We are hoping a large number of ladies will be able to attend these meetings.

On Wednesday morning, May 3, an Executive Board meeting will be held at 10 o'clock and at 11 o'clock on the same morning the Executive Council will meet.

Each County Auxiliary is entitled to send to each annual meeting their president and one delegate or alternate for every five paid-up members. Each delegate shall present the report of dues of her County Auxiliary as her credentials.

All dues should be paid through the County Auxiliaries, where one exists, not later than March 1. Each county treasurer should send in her report of membership and paid up dues to the state treasurer by April 1. This will enable the state treasurer to make up her reports for the May meeting.

The Kansas Medical Auxiliary program will be given in full in the doctor's Kansas Medical Society Program.

MRS. E. C. DUNCAN, State President.

DEATH NOTICES

Robinson, Joseph B., Hiattville, aged 74, died at Ft. Scott, January 6, 1933, of chronic myocarditis. He graduated from College of Physicians and Surgeons, Keokuk, in 1878, and Jefferson Medical College, Pennsylvania, 1891. He was not a member of the Society.

Hissem, Ralph Waldo, Wichita, aged 46, died February 27, 1933, as result of an automobile accident, February 24. He graduated from University of Kansas School of Medicine, in 1911. His practice was limited to urology and dermatology. He was a member of the Society.

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of December 31, 1932, the following has been accepted:

United State Standard Products Co.—Diphtheria Toxoid—U.S.S.P.

Foods

The Committee on Foods of the American Medical Association has accepted the following products for inclusion in Accepted Foods:

Gerber's Strained Cereal, Long-Cooked in Milk (Unseasoned) (Gerber Products Company, Fremont, Mich.)—Strained, cooked whole wheat, oats and wheat germ; cooked in milk. The coarse bran is strained out. It is claimed to be especially prepared for infant feeding, children, convalescents and special diets.

Quaker Pearl Hominy (The Quaker Oats Company, Chicago).—Coarse cracked and pearled white Indian corn grits containing practically no bran or germ.

Prudence Beef Stew (Boston Food Products Company, Boston).—Canned beef stew containing cooked beef, potatoes, carrots, onions, salt and pepper.

Prudence Ready to Brown Corned Beef Hash (Boston Food Products Company, Boston).—Canned corned beef hash; cooked corn beef and potatoes; seasoned with salt and pepper.

1. Sunrise Brand Tomato Juice. 2. Advo Tomato Juice. 3. Good Morning Tomato Juice. 4. Herald Brand Tomato Juice. 5. Kamo Brand Tomato Juice. 6. Daisee Brand Tomato Juice. 7. Krasdale Brand Tomato Juice. 8. Fleetwood Tomato Juice. 9. Approval Tomato Juice. 10. New State Brand Tomato Juice. 11. Pickwick Brand Tomato Juice. 12. 18-K Brand Tomato Juice. 13. The Rider Brand Tomato Juice. 14. Leslie Brand Tomato Juice. 15. Goodyear Brand Tomato Juice (Vincennes Packing Corporation, Vincennes, Ind., packer; 1. Miner, Read & Tullock, New Haven, Conn. 2. McCord Brady & Co., Omaha. 3. Good Morning Co-Operators, Terre Haute,

Ind. 4. Mazo Lerch Company, Washington, D. C. 5. Paxton and Gallagher Company, Omaha. 6. The Herrman Company, Paterson, N. J. 7. A. Krasne, New York. 8. King, Dobbs & Co., Chattanooga, Tenn. 9. M. E. Horton, Inc., Washington, D. C. 10. The Williamson-Halsell-Frasier Company, Oklahoma City. 11. Kansas City Wholesale Grocery Company, Kansas City. 12. Winston and Newell Company, Minneapolis. 13. The Nicholas Reiter Company, Baltimore. 14. Cressey Dockham & Co., Inc., Salem, Mass. 15. Mazo-Lerch Company, Washington, D. C., distributors).—Pasteurized tomato juice with added salt; claimed to retain in high degree the vitamin content of the raw juice. (Jour. A.M.A., January 21, 1933, p. 186).

Quaker Hominy Grits (The Quaker Oats Company, Chicago).—Coarse white Indian corn grits containing practically no bran or germ. It is claimed to be for all table uses.

1. Red Cross Brand Sterilized Unsweetened Evaporated Milk. 2. Gold Cross Unsweetened Sterilized Evaporated Milk. 3. Northfield Brand Sterilized Unsweetened Evaporated Milk. 4. Columbine Sterilized Unsweetened Evaporated Milk (1. Colorado Condensed Milk Company, Fort Lupton, Colo.; 2. Mohawk Milk Products Company, New York City; 3. Northfield Milk Products Company, Northfield, Minn.; 4. Colorado Condensed Milk Company, Fort Lupton, Colo.; subsidiaries of the Carnation Company, Milwaukee).—Unsweetened sterilized evaporated milk. (Jour. A.M.A., January 28, 1933, p. 259).

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Propaganda and Reform

Hazards of Iodized Oil Injections.—It has been ten years since Sicard and Forestier introduced into medical practice the iodized oils as diagnostic agents. These appeared to offer great possibilities in the localization and definition of certain lesions in the cavities of the body. Occasionally incidents have been reported showing that the injection and retention in the body of these oils are not without danger. In a recent issue of *The Journal*, December 3, 1932, p. 1946, appeared a report of the Council on Pharmacy and Chemistry dealing with the dangers of the injection of iodized oils. The report emphasized anew the necessity for a policy which has guided the Council in its deliberations over the past quarter of a century; namely, that of insisting on due caution in the use of all new methods and preparations until their potentialities for doing damage have been subjected to the test of scientific scrutiny. (*Jour. A.M.A.*, January 7, 1933, p. 46).

Misbranded "Patent Medicines."—The following "patent medicines" have been the subject of prosecution by the Food and Drug Administration of the U. S. Department of Agriculture which enforces the Federal Food and Drugs Act; Goldban's Celebrated 449 Remedy (Hance Bros. and White, Inc.), containing potassium nitrate, methenamine, uva ursi, alcohol and water. Iroquois Famous Indian Herb Tea (Iroquois Famous Indian Remedies Co., Inc.), containing coriander, fennel, celery, senna, buchu, chamomile, sassafras and triticum. Soak-In Liniment (Morgan and Sampson), chiefly oils, including methyl salicylate (49 per cent), and peppermint. Novak's Kidney Pills and Komet (John Novak Co.): The pills containing methylene blue and cubeb oleoresin; the Komet, an ointment essentially of petrolatum base

containing methyl salicylate, camphor and menthol. Bel-Rub (W. E. Shuit, Inc.), an ointment with a petrolatum base containing methyl salicylate, camphor and menthol. Davis' Union Tonic (Charles T. Davis), containing epsom salt, with extracts of plant drugs, including licorice, a laxative, a bitter, salicylic acid and water. Myer's (Dr.) Pneumonia Compound (Myers Remedy Co.), containing sodium salicylate, extracts of plant drugs, sugar, alcohol and water. Diatussin (Ernst Bischoff Co., Inc.), containing extracts of plant drugs including thyme, with alcohol and water. Histosan Syrup (Ernst Bischoff Co., Inc.), containing guaiacol, protein matter, sulphates, sugar and water. Metro-Oil (Metro-Oil Co.), containing mineral oil, volatile oils including rose oil, and a small amount of pyridine. Wampole's Vaginal Cones Boroglyceride Compound with Ichthyol (Henry K. Wampole and Co.), containing boric acid, borax, zinc and sulphonated compounds, gelatin and glycerin. Bee Brand Laxative Quinine Tablets (McCormick and Co.) containing acetanilid (1.9 grains per tablet), cinchonin, caffeine, podophyllum resin and a trace of quinine. Ferrosanol (Haemozon Products Co.), containing common salt, hydrochloric acid, iron (ferrous and ferric) salts and water. K P N Nutrition No. 50 and K P N Nutrition No. 75-25 (Perfect Nutrition Co., Inc.): No. 50 being essentially a mixture of alfalfa, beets, parsley, and seaweed; No. 75-25 essentially a mixture of beets and kale. B 5000 (Robert P. Gust Co., Inc.), containing extracts of plant drugs including a laxative drug, trace of alkaloids, resins, aloin, alcohol and flavored water. Eucaline Tonic Compound (Eucaline Medicine Co.), containing cinchona hydrochloride, iron chloride, a laxative plant drug, sugar, alcohol and water; the "tasteless" form had essentially the same composition, with the

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addition of acetanilid. Mygrone (John Wyeth and Bro., Inc.), containing amidopyrin and fillers. Bora-cetine (F. E. Barr and Co.), containing baking soda, sodium borate, potassium chlorate, thymol, menthol, eucalyptol and cassia oil, alcohol and water. Romi-neck's Diuretic Pills (Hance Bros. and White, Inc.), containing extracts of plant drugs including licorice, bearberry, buchu and juiper oil. Monroe's Formula No. 7 (Dow Drug Co.), essentially iron and ammonium citrate, sodium benzoate, potassium iodide, very small amounts of hydrastis, with glycerin and water. Kavatone (Gray's Medicine Co.), containing potassium iodide, a laxative drug, sassafras oil and methyl salicylate, isopropyl alcohol, glycerin and water. Blue's (Dr.) Kidney and Bladder Remedy and Dr. Blue's Wonderful Blood Purifier (James T. Blue Chemical Co.): Kidney and Bladder Remedy was essentially methenamine, potassium acetate, buchu, sugar, alcohol and flavored water; Blood Purifier was essentially epsom salt, potassium iodide, sodium salicylate, and sassafras, with water and vanilla flavoring. Beach's Gen-Sen Tonic (Beach's Wonder Remedy Co.), essentially baking soda, common salt, saccharin, volatile oil including cassia, menthol and methyl salicylate, alcohol, water and a trace of borax. Oxien Nazone Salve (Great Oxie Co.), an ointment with a petrolatum base, sassafras, oil, camphor oil, methyl salicylate, and traces of carbolic acid and menthol. T. M. C. Laxative Cold Tablets (Frederick Stearns and Co.), containing acetanilid, cinchonine salicylate, podophyllum and camphor. C. P. R. Tablets (P. McConnel Co.), containing aspirin, acetphenetidin, a laxative drug, and red pepper. Standard Cough and Cold Compound (Standard Remedy Co., Inc.), essentially tar, menthol, extracts of plant drugs

including wild cherry; salicylic acid, sulphuric acid, glycerin, sugar and water. Standard System Tonic (Standard Remedy Co., Inc.), containing epsom salt, salicylic acid, saccharin, licorice, sassafras, wild cherry and water. Welch's Aegopodium (W. C. Welch), containing potassium iodide, colchicine, alcohol and water. Adropsedema (Van Seaton Chemical Co.), containing metallic iron, scoparius and gelsemium. Leonard's Elixir (S. B. Leonardi & Co., Inc.), containing potassium iodide, extracts of plant drugs, small quantity of an iron compound, alcohol, sugar and water. Chewalla (Chewall Co.), containing potassium iodide, acetic acid, a laxative drug, alcohol and flavored water. Four-Forty Four (4-44) (W. B. Nethery), containing epsom salt, compounds of ammonium, sodium, potassium and phosphorus, small quantities of saccharin and salicylic acid, traces of calcium, iodine and manganese, sugar and water, flavored and colored. (Jour. A.M.A., January 7, 1933, p. 58).

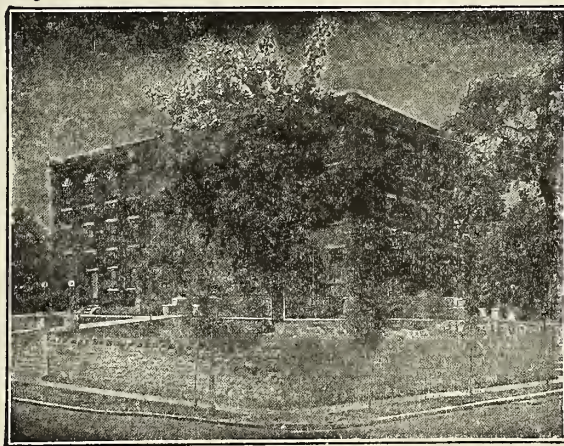
Dr. Stoll's Diet-Aid.—Several inquiries have been received within the past year regarding "Dr. Stoll's Diet-Aid, the Natural Reducing Food." The address of Diet-Aid, Inc., is also the address of Dr. John E. Stoll, who, according to our records, was born in 1900, was graduated by Rush Medical College, Chicago, in 1925, and licensed in Illinois the same year. In reply to an inquiry addressed to Dr. Stoll he stated that Diet-Aid is intended to be taken in the form of a beverage by those on a reducing diet, and is a compound of milk chocolate, starch, and a water extract of roasted whole wheat and bran; that Diet-Aid has the following composition: carbohydrates, 75.5 per cent; crude fat, 3.6 per cent; crude protein, 9.2 per cent; ash, 5.6 per cent; moisture, 6.1 per cent.

JAMES Y. SIMPSON, M.D.,
Neurologist and Addictologist

HERMON S. MAJOR, M.D.,
Neuro-Psychiatrist

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Dr. Stoll also stated that in making the ordinary drink of Diet-Aid, one level teaspoonful was used in a cup of water. This weighs about 3 grams, and in view of the composition of Diet-Aid, would give almost 11 calories (10.89) in all, in a cup of Diet-Aid. In this connection, it is worth remembering that a tablespoonful of whole milk has a fuel value of 14 calories. According to the directions on the trade package, the person is told to substitute "one or more cups" of Diet-Aid in the place of breakfast and lunch. The average sedentary woman's daily fuel requirements range from 1,800 to 2,300 calories. The breakfast for such a woman would call for caloric values ranging between 400 and 600. According to Dr. Stoll's plan, such a woman, would take "one or more cups" of Diet-Aid having a fuel value of less than 11 calories to the cup, of which 9 calories would be carbohydrate. The same would be true for the luncheon. The person who follows the Diet-Aid suggestion must inevitably receive a hopelessly unbalanced diet. (Jour. A.M.A., January 21, 1933, p. 207).

Néocaine.—One original package of Rachi-Néocaine Corbière (Laboratoires Pharmaceutiques Corbière, Paris; Sole U. S. Agents, the Anglo-French Drug Company, Inc., New York) was submitted to the A.M.A. Chemical Laboratory for preliminary examination. Qualitative tests indicated the presence of procaine base (paraaminobenzoyl-diethylaminoethanol) and chloride. On thermal analysis the specimen was found to be identical with procaine hydrochloride U.S.P. Néocaine appears therefore to be the French proprietary name for procaine hydrochloride. The product has not been submitted to the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies. (Jour. A.M.A., January 21, 1933, p. 210).

Bancroft's Thiocyanate Therapy.—Recently The Journal referred to Bancroft's method for the control of narcotic addiction and of the effects of anesthetic drugs. Choosing sodium thiocyanate—also designated rhodanate by some chemists—as the peptizing agent, the Cornell University chemists believed that the sensory nerve colloids are albumin-like and should absorb the thiocyanate ion strongly and be easily peptized by the cell electrolytes. The experiments have recently been criticized as unconvincing by Burkholder of the department of pathology at the University of Chicago. His results obtained with sodium thiocyanate as an antagonist for ether did not corroborate the conclusions brought forth by Bancroft and Rutzler that thiocyanate ions antagonize the anesthetic action of ether. In a large majority of the experiments with ether the return to normal of the lid reflexes and other manifestations required a longer time in these experimental animals than in their controls. As an antagonist for sodium amylal it was found that the sodium thiocyanate did not shorten the long anesthesia but instead lengthened it, and decreased instead of increased the respiratory rate. As an antagonist for morphine it was found that the morphine narcosis was not counter-acted in any way and that gradient reduction in the dosage of thiocyanate still proved fatal or toxic. Such a recital of actual attempts to corroborate Bancroft's results warns against undue exploitation of a drug of which the pharmacologic effects are by no means conclusively established. (Jour. A.M.A., January 28, 1933, p. 262).

The Federal Trade Commission.—At various times attention has been called to the good work that is being done by the Federal Trade Commission in pro-

THE ROBINSON CLINIC

Heredity has been always a controversial subject in medicine, and its influence in the production of disease, has been always overestimated. Tuberculosis is one outstanding example.

In psychiatry, as elsewhere, when a disease could not be satisfactorily explained, we have fallen back on heredity as an etiologic factor. However, as psychology and pathological psychology become more scientific in their outlook, we are beginning to understand that environment is a very important predisposing cause of insanity—if not the most important.

Physicians can help prevent insanity by lending a more attentive ear to the unusual behavior of children. Whenever a mother mentions that a child is acting queerly or is doing things out of the ordinary, do not pass it off with the remark that "boys will be boys," or think that nothing can be done, because his great uncle was insane. Listen to the stories, give good common-sense advice and, if the condition becomes worse, call in an expert, before an insanity develops. Prevention pays big dividends; cure is sometimes impossible.

**Nervous and
Mental
Diseases**

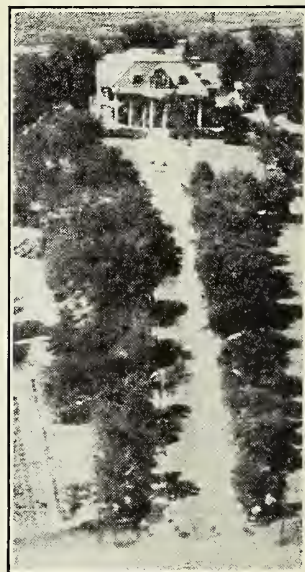
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Airplane View

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tecting the public against misrepresentation or fraud in the medical or quasi-medical fields. Congress has given this Commission power to investigate and take action on cases that involve or that seem to involve what are broadly spoken of as unfair trade practices. Where such investigations prove that unfair trade practices have been indulged in, the Commission can, and in many instances does, obtain from the individual or concern involved a signed stipulation to the effect that the objectionable methods will be abandoned. If a stipulation cannot be arrived at, the Commission may issue what is known as a Cease and Desist Order, in which the person or concern involved is ordered to cease and desist from the objectionable practices. A few of the many cases reported in the Commission's bulletins in the past few months were: Marvo (William Withol and Marvo, Inc., New York City).—The firm has agreed to discontinue representing that Marvo will, within three days' time, remove pimples, blackheads, crow's-feet around the eyes, wrinkles, etc. It appears that Witol's Marvo had at one time as its active caustic ingredient salicylic acid. Later resorcin seems to have been the active ingredient. Reports have been received from physicians of severe reactions suffered by patients who had used the Marvo product. Hildebrand Laboratories.—Frank Granzow of Chicago, whose trade name is "Dr. Hildebrand Laboratories," sold an alleged treatment for gallstones, stomach trouble, nervousness, jaundice and constipation. He has agreed to discontinue representing that his treatment will cure the ailments specified, when such is not the fact. The Hildebrand product has been reported to contain menthol, oleic acid, phenolphthalein, powdered gentian, castile soap and sodium salicylate. Goldman Hair Dye (Monroe Chemical Company, St.

Paul).—The concern has agreed to discontinue representing that the dye will "restore" the color of the hair, that the treatment takes only seven or eight minutes and requires only a few cents' worth of dye, and that the gray hair regains its youthful color overnight, when such are not the facts. The product is a hair dye of the silver-salt type. Cystex (The Knox Company, Kansas City, Mo.).—The Knox Company has agreed to discontinue making false and misleading claims for its nostrum. Cystex, it seems, comes in the form of two tablets, gray and brown. A few years ago the gray tablets were said to contain hexamethylenamine, powdered extracts of colchicum, calcium phosphate, and thyroid substance. Later, reference to thyroid substance was omitted. The brown tablets have been claimed to contain extracts of hydrangea, corn silk, buchu and triticum, with boric acid, potassium bicarbonate and atropine sulphate. Lepso—A mail-order epilepsy cure put on the market by R. P. Neubling of Milwaukee, doing business under the trade names R. Lepso and Lepso Company. Neubling has agreed to discontinue his claim that the stuff can be taken safely by children, when such is not the fact, and also to cease claiming that the product is a competent treatment for epilepsy without indicating the limits of its effectiveness. The product, at the time it was examined in the A.M.A. Chemical Laboratory, was found to contain the equivalent of 51 grains of potassium bromide to the dose. Dermolax.—H. G. Levy, who traded as the Interstate Laboratories of Chicago, has agreed to discontinue representing that psoriasis is caused by a germ localized in the tissues of the skin and that Dermolax Ointment and Soap would reach the seat of the trouble, when such is not the fact. He has also agreed to cease representing that Dermolax is a spe-

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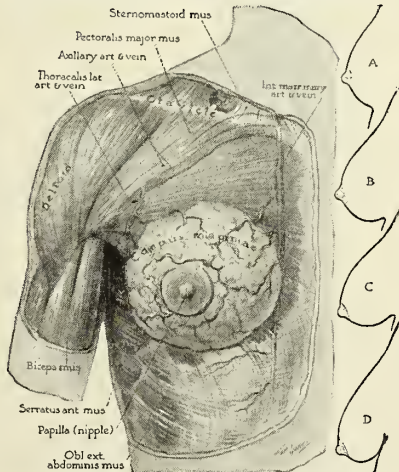
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cific treatment for psoriasis. Information received by the Bureau of Investigation in 1929 was to the effect that the Dermolax "treatment" consisted of a white product containing ammoniated mercury and a brown preparation that contained chrysarobin. (Jour. A.M.A., January 28, 1933, p. 275).

R

FOR SALE—Doctors office supplies. Diathermy, polysine, alpine ray, basal metabalor, vattenborg irrigator, laboratory equipment, sterilizer, light, instruments, surgical supplies, three desks, three tables, eleven chairs, two typewriters, iron safe, scales, two couches, books and bookcases. Address L. M. Powell, M.D., 701 Taylor Street, Topeka, Kansas.

FOR SALE—Account death of Dr. N. Adair Kidd, physician's office equipped complete, x-ray, diathermy, mercury arc light, and complete set of instruments for general practice, also library. Would like to sell complete, but will consider separate sales. Address Mrs. Minnie Kidd, Ellis, Kansas.

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Reprints of original articles will be furnished the authors at the following rates, if the order for same is received within fifteen days after the Journal is mailed. These prices are based on the number of pages of the Journal the article occupies:

Three pages or less, first 100, \$9.00; additional 100's, \$2.50. Four pages, \$12.00; add. 100's, \$3.00. Five pages, \$15.00; add. 100's, \$4.00. Six pages, \$18.00; add. 100's, \$5.00. Seven pages, \$21.00; add. 100's, \$6.00. Eight pages, \$24.00 add. 100's, \$7.00.

If orders are received after the forms are destroyed an additional charge will be made to cover the cost of resetting the type.

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With the advent of the therapeutic importance of Vitamins, there has been instituted a tremendous amount of research work, both for the purpose of determining the true value of the Vitamin and also, for the purpose of developing sub-

stitutes for the natural vitamins as they occur in cod liver oil.

In connection with this research, there has also been clinical work done on the question of mass doses and we find a divided opinion as to the value of administering vitamins in mass doses.

NATURAL VITAMINS

It has long been our contention that, based upon the history of two hundred years of Cod Liver Oil therapy, there existed no logical reason why we should turn aside from this well tried and established remedy and delve into the complexities of chemically produced substitutes, or reinforcing beyond the body's ability to absorb Cod Liver Oil.

ADMINISTRATION OF VITAMINS

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ORIGINAL ARTICLES

INSECTS AND POISONOUS SNAKES*

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In view of the fact that the mortality in the United States is as great if not greater from bites and stings of insects than from bites of venomous snakes, I wish to dwell upon that subject.

The sting of the common honey bee, wasp, hornet, centipede or scorpion, as well as the bite of the tarantula and black widow spider, contains two differently acting poisons. The local pain, swelling and tenderness in each is caused by formic acid. The initial shock and collapse are caused by the pain and not by the poison. The systemic poison has a double action, it very closely resembles foreign protein reaction and produces anaphylactic shock, rushing of blood to the head, flushed face, choking, air hunger and coughing. This may pass off in a few minutes, however, and be followed by general weakness and later by a leakage of blood outside of the capillaries forming discolored areas over the body simulating purpura hemorrhagica.

A person may die from any of the three shocks, especially if they have a weak heart. The shock of pain, the anaphylactic shock or later from the shock accompanying the general systemic poisoning. Many persons, shortly after being stung, become unconscious and remain so for a considerable length of time, often from twelve to twenty-four hours. Persons who are repeatedly stung acquire an immunity.

Owing to the high potency of the poison from the sting of the centipede and scorpion the circulation is so much interfered with that a slough often occurs.

In regard to treatment, there are no remedies which, when applied locally will

relieve the pain, as local applications do not penetrate the skin. However, if the patient is placed in a reclining position and the head lowered it may prevent fainting. The best local application is a paste of equal parts of laundry soap and soda or a dressing of saturated solution of magnesium sulphate. In case of centipede or scorpion sting use the solution hot as it may lessen the slough.

Hypodermic injections of atropine or adrenalin act well in cases of shock. However the patient will probably either be dead or have recovered from the shock, caused by pain or anaphylaxis before the physician arrives. The shock which kills more often and makes susceptible ones sickest, comes later, and in these cases adrenalin seems to be a specific. It should be given hypodermatically in four or five minim doses and repeated every 15 or 20 minutes. It is a powerful heart stimulant and gives quick relief if the patient is not too far gone.

In regard to snakes, the helplessness of the physician for centuries when called to attend a patient suffering from the bite of a venomous reptile, has been most pitiful. At present in this field as well as many others, science has prevailed and it is no longer necessary for him to conjure up some kindly art of making the patient feel as hopeful and comfortable as possible while he is dying from the effects of a poison, the counteraction of which was unknown. Now he can give a dose of Antivenin and on leaving feel as well satisfied that he has really done something for his patient as though he had given a dose of diphtheria antitoxin when it was indicated.

Twenty-five years ago an institute was established in France, horses were immunized against the venom of the cobra and a serum was obtained from their blood. This was used in India and found to be quite efficient if used soon after the patient was bitten.

*Read at the 74th Annual Meeting of the Kansas Medical Society, Kansas City, Kansas, May 3, 4, 5, 1932.

Ten years later an institute was established in Butatan, Sao Paulo, Brazil, and four sera were manufactured which were effective in counteracting the venom of the poisonous snakes of Brazil. We are at present indebted to a modern St. Patrick, one Dr. Do Amaral, who crossed the equator from the Southern hemisphere, bringing with him vast experience and knowledge obtained in the Brazilian campaign to become director of the Antivenin Institute of America, located at Glenolden, Pennsylvania.

There are only four poisonous snakes in America. The rattlesnake, the copperhead the moccasin and the coral snake, the latter being scarce yet very poisonous. The composition of the copperhead and moccasin venom is quite similar and may vary only in the amounts of the individual constituents yet they both differ from the venom of the rattlesnake.

Rattlesnake venom is a thick, amber colored liquid, neutral or slightly acid, the specific gravity being from 1030 to 1050. It is composed of powerful fibrin and antifibrin ferments which attack the coagulating element of the blood; a proteolytic ferment which dissolves muscular tissue; cytotoxins which dissolve the red and white blood cells, endothelial and nerve cells; neurotoxins with an affinity for the nerve terminals of the muscles; a neurotoxin with especial affinity for nerve cells, and a substance which attacks the heart muscle and often causes it to stop in systole.

It was originally thought that although the venoms of the different poisonous snakes differed from one another in the proportionate amounts of neurotoxin, hemorrhagin, hemolysin and other principles, nevertheless the neurotoxins of different species were identical and the same rule held true for the hemolysins and other principles. This conception was based on the similarity of the symptoms produced by the venoms of widely different types of snakes.

Immunologic study by modern methods of the relations between antigens and antibodies, however, established the fact that the venoms of different types of serpents differ widely from one another, at least in their immunologic aspects. It

has been shown that the serum of a horse hyperimmunized to rattlesnake venom gives very little if any protection against the venom of the cobra. On the other hand, there is considerable similarity between the venoms of certain related species.

In order to obtain an adequate supply of venom for immunizing horses it was necessary to establish stations throughout the United States for collecting live healthy snakes of the three varieties so that a polyvalent serum could be manufactured.

After the stations were established and ready for operation Dr. Do Amaral made a tour, visiting the stations for the purpose of instructing the individual keepers in the technic of procuring the venom from the snakes.

The venom of a snake is given him primarily to destroy the animals which he uses for food but, of course, he also uses it for his own defense.

A few words as to the anatomy of the snake's head. The poison glands, which are quite similar to the parotid gland, are situated on each side of the head, below and behind the eyes, near the angle of the superior and inferior maxilla. They are surrounded with a capsule of fibrous tissue which is a prolongation of the zygomatic ligament and fibers of the temporal muscles. The excretory canal, emerging from the gland, follows an upward, forward and downward course to connect with the lumen of the fang which is not unlike a hypodermic needle. The main fangs are attached to the anterior part of the maxilla and fold back against the roof of the mouth. When the snake strikes the fangs are raised by the ptergoid bone and muscle to an angle of 90 degrees.

I wish to briefly outline the technic of procuring the venom and the manufacturing of the serum. In the workroom where the snakes are housed a table is placed the right height for the operator, on the corner of which is securely fastened a 50 cc. sedimentation glass. The top of the glass and edge is covered with a piece of rubber about the thickness of an automobile inner tube and a hole an inch in diameter is cut in the rubber

about one-half an inch from the edge of the glass. This is covered with rubberized silk or linen cloth, stretched tight and fastened by adhesive strips. This furnishes a pad for the glass to prevent injuring the mouth of the snake.

The snake is removed from his pen with a hooked stick about four feet long and placed on the floor. When he attempts to crawl away he is approached from behind and gently pinioned to the floor by placing the stick on the back of his neck. The operator quickly grasps him around the neck just back of the head with his left hand, his body being picked up by the right. The snake's head is brought close to the sedimentation glass and after one or two passes toward it he opens his mouth and the fangs are quickly and carefully pressed through the cloth over the hole in the rubber. The thumb of the left hand is moved forward and by pressure and massaging the venom is expelled. A snake expels about one-fourth of its supply as soon as the fangs penetrate the cloth. When no more venom can be obtained the fangs are carefully withdrawn and the snake is returned to his pen. Snakes can be treated in this manner every three weeks and yield from one-half to two and one-half cc. of venom each time.

The venom from the different varieties is collected separately. The fluid is placed in an incubator and evaporated to a crystalline solid, packed, labeled, dated and is ready to ship to the laboratory.

The crystals are weighed and dissolved in glycerine and water to be used as an antigen in immunizing horses for the production of serum. The process is not unlike that which is used in preparing other well known sera.

The sera obtained from horses immunized by repeated increasing doses of venom from the rattlesnake alternated with copperhead and moccasin produces a polyvalent serum which is used for the bites of rattlesnake, copperhead or moccasin. This sera is marketed in 10 cc. syringes and is ready for instant use.

There are four factors which limit the amount of venom injected when a person is bitten that should be taken into consideration:

1. The location of the bite. The most serious occurring in a vascular part of the body where the venom is quickly absorbed.

2. A bite through bare skin is about four times more serious than one through clothing.

3. The bite of a medium size snake is usually more serious than from a small or very large one as the very young and very old snakes secrete less venom. Yet, mere size or number of rattles seldom give true estimate of the age of the snake.

4. The bite of a snake that has a lump in its body, showing that it has fed within three days is much less serious than one from an empty snake, as the reptile expels about one-fourth of its venom at a bite. Three days are usually required for it to digest its food and about two weeks to replace the venom expelled at the bite.

It might be well to mention that the reason hogs seem to be immune to snake venom is due to the fact that they are so well protected with adipose tissue, in which the circulation is poor, and the venom is absorbed very slowly.

In persons bitten by a poisonous snake we may have many variations in the clinical picture. The first sensation is of extreme pain locally, soon followed by a tingling over the entire body very closely resembling an electric shock. Vertigo, nausea, vomiting, dimness of vision, burning in the throat, numbness of the tongue and lack of co-ordination of the muscles. Multiple paresis is common, especially affecting the inferior facial nerve. Bleeding from mucous surfaces, nose, mouth, lungs, stomach, rectum and urinary organs. Feeling of suffocation from paralysis of the respiratory apparatus. Considerable swelling and discoloration in the region of the bite. The pulse may be slow and weak or rapid and thready and blood pressure is low. The patient is suffering from shock. Feces and urine are seldom passed and a catheterized specimen would probably contain much blood. The patient suffers greatly from thirst; photophobia and congestion are usually present. The patient remains with eyes closed and a relaxed condition of the facial muscles.

Speaking, breathing and swallowing are difficult and painful. They are usually conscious and have no desire to sleep although many authors speak of somnolence. How often we have heard of the use of local hypodermic injections of permanganate of potassium with wet dressing of the same; immersing the member in turpentine or coal oil, or the internal administration of large doses of alcohol, alum or echinacea. These and many other remedies are the results of the before mentioned kindly arts; but through Divine Providence and natural resistance some of the patients lived in spite of the treatment because the mortality is only about 25 per cent.

As a first aid measure when a person is bitten on one of the extremities it is advisable to apply a ligature above the bite tight enough to check the venous supply; this ligature to be released for a short time every 15 or 20 minutes, allowing the poison to enter the system less rapidly. Crucial incision and suction is beneficial even if no ligature has been applied and several hours have elapsed since the bite; because the swelling retards the circulation through both blood vessels and lymphatics. Although the incision is only one-fourth of an inch deep and three-quarters of an inch long over the fang punctures it is sometimes necessary to apply an ice compress to control the bleeding. As to hypodermic medication adrenalin holds first place but strychnine and caffeine are very good. Digitalis is contra-indicated and should not be used. Use the Antivenin by either subcutaneous, intramuscular or intravenous injection, the route depending on the severity of the symptoms. The venom injected by a snake is constant so the smaller the body the greater the need for serum. Therefore the child must have as much if not more serum than an adult for it not only has a small body but less resistance. Ten cc. of Antivenin should be the dose to be repeated within two hours if necessary. Some cases of snake bite are followed by severe symptoms of shock. The hemoglobin may drop to 35 per cent and the red cells to as low as two million. In such cases the systolic blood pressure may be as low as eighty, and the thready pulse may rise to 180.

In some cases it is impossible to feel the pulse for as much as 18 to 24 hours. The lessening of blood pressure and decrease of volume of blood in the circulation is associated with vaso-motor collapse. To overcome this decrease of blood in the circulation a blood transfusion is indicated, if the blood be matched and typed rapidly but in severe cases the hemolytic action of the venom makes this impossible and should such be the case blood injected into the peritoneal cavity has given good results and in such cases no typing or matching is necessary. Patients who show signs of a lethal dose of venom should be closely watched for at least 24 hours. The local area should be immersed in some antiseptic solution because the body resistance is low and there is much chance for infection at the point of contact. It is well to precede the first dose of Antivenin by a hypodermic of adrenalin, because so many persons have an idiosyncrasy to horse serum. It has been proven that Antivenin is much more efficient than plain horse serum in cases of haemophilia, because the horse is fighting the action of the fibrin and antifibrin ferment in the venom while he is being repeatedly injected.

Snakes very frequently expel 50 per cent of their venom at a strike. It has been proven that the rattlesnake will inject 30 mgms. and the copperhead and moccasin 12.5 mgms. with a perfect strike. One cc. of Antivenin will neutralize 3.5 mgms. of snake venom. From 10 to 20 cc. of Antivenin is usually all that is required. Complete neutralization is not necessary as the body can take care of a certain amount of venom. To save life it is requisite only to counteract the excess. However, it is much better to err on the side of safety and give too much rather than too little Antivenin.

The spectacle of a fair daughter wearing a snake skin coat; snake skin hat; snake skin slippers, powdering and lip sticking with articles taken from a snake skin hand bag should cause the ophidia to emit a hiss of satisfaction for it only goes to show that our Modern Eve is still being tempted by the serpent.

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DIAPHRAGMATIC HERNIA, THREE CASE REPORTS*

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It is very interesting to know that Ambroise Pare reported the first two cases of diaphragmatic hernia in 1610. Sisk¹ estimated there had been not more than one thousand cases reported up until 1920. With our improved means of diagnosis we are finding more cases and with the increasing number of automobile and violent accidents we must be constantly on the lookout for these cases. Each one is an individual story in itself and the majority are very interesting and valuable. For this reason Sanders² urges the detailed report of every case. I have seen three cases in the last few years which I am reporting in detail.

CASE NO. I.

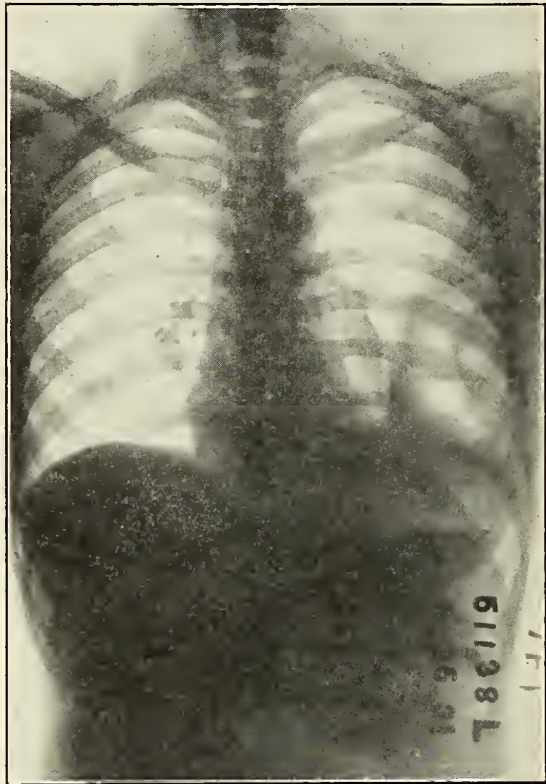
The patient F. S., female, age thirty years, entered the hospital on May 25, 1931, complaining of pain in the abdomen. The pain was very severe. It had seized her while working and was of such intensity as to cause her to double up. This was followed by vomiting which continued until her entrance into the hospital. She was unable to retain any food or fluids. There had been no bowel movements for five days and enemas gave no results. Her pain had been continuous since the beginning of the attack.

Physical examination revealed a temperature of 97.6 degrees, pulse 80 per minute, respirations twenty-eight. She was fairly well developed and nourished, appearing acutely ill. She was dehydrated. Her abdomen was markedly distended with guarding in the left upper abdominal quadrant. There were no visible peristaltic waves. The remainder of her physical examination was essentially normal.

The laboratory examination showed the urine normal, white blood count 5,000, the differential count showing: 78 polymorphonuclear leucocytes and 21 lymphocytes. The non-protein nitrogen was 24.6 mgm per 100 cc. The blood chlorides 610 mgm per 100 cc. and the plasma bicarbonate 54 volumes per cent.

†From the Louisville City Hospital, Louisville, Kentucky.
*Read before the Cowley County Medical Society, March 17, 1932.

An x-ray of the chest showed an irregular area in the left lung field which was apparently filled with gas. This was thought to be a possible herniation of the left diaphragm with a portion of the colon in it.



CASE NO. I.

x-Ray No. I showing a marked irregularity in the left lung field containing numerous gas pockets. There is some displacement of the mediastinal structures to the right.

The patient was operated by the resident surgeon several hours after her entrance into the hospital and an abdominal exploration was made first. A portion of the transverse and descending colon and part of the spleen were found protruding through a hole in the left side of the diaphragm. The structures were adherent to the diaphragmatic opening and there was a definite obstruction to the fecal current. An attempt was made to reduce them through the abdominal route which was unsuccessful. It was necessary to resect a portion of the eighth rib and to enter the chest cavity in order to return the abdominal contents to their proper places. After reducing the abdominal viscera the diaphragm was sutured. The chest was closed and an at-

tempt was made to withdraw the air from the pleural cavity in order to inflate the lung. The abdomen was closed without intestinal drainage. The patient was in very poor condition when she was returned to bed.

On the first post operative day the patient was still in a very bad condition and then she improved rapidly until the fourth day at 2:30 a.m. she passed away suddenly and unexpectedly. Her death was thought to be of an embolic origin.

CASE NO. II.

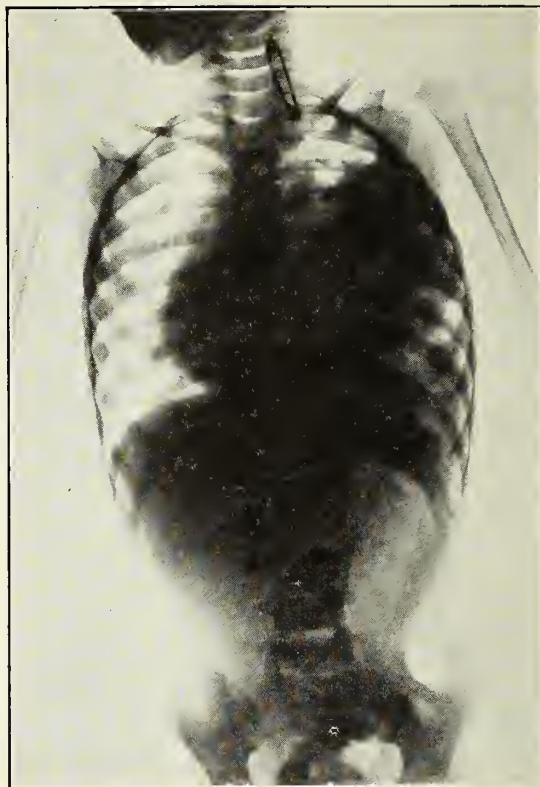
History: J. S., a white male child, age three years, was admitted to the hospital on September 22, 1930, because of an acute nutritional disturbance. He had had an onset of diarrhea six weeks previously and it had continued until three days before his admission to the hospital. The stools were green and contained mucus, numbering from eight to twelve movements every twenty-four hours. The mother thought the child still had a fever and described him as being drowsy and listless. He lacked an appetite for the most part of his period of disability but at times there were good days.

The child sat up at one year, walked at two years and talked at one and one-half years of age. Had had no previous intestinal disturbances. Enuresis for past six months. Sleeps well.

Illnesses: Pneumonia at one year, chickenpox and whooping cough in second winter. Occasional sore throat attacks. He was a full term child, birth weight six pounds, normal delivery. On admission he was eating a regular diet.

Examination: Poorly developed and nourished. Did not look acutely ill. Average intelligence. Chest—had a pigeon breast type. Supraclavicular notches were prominent. Intercostal spaces sunken. Some flaring of lower rib margins. Apparently normal resonance throughout chest. Crepitant and moist rales heard throughout the chest.

Heart: Examination of the left precordial area revealed heart sounds to be distant and indistinct. Apex beat not visible. Right side of chest—apex beat and point of maximal intensity of heart sounds were found just below the right nipple.



CASE NO. II.

x-Ray showing a marked increase in density on the left side of chest from the region of the second rib downward. There is marked displacement of the heart and mediastinum to the right.

Abdomen: Tympanitic. Liver enlarged downward to a slight extent below the costal margin.

The clinical impression was an acute nutritional disturbance, possibly dysentery, a mild respiratory infection and a possible dextra cordia.

Laboratory Examinations: Wassermann negative. Urine negative. White cells 15,600; 82 per cent polymorphonuclears and 18 per cent lymphocytes. Tuberculin test negative. An x-ray of the chest showed a marked increase in density from the region of the second rib on the left side downward. There appeared to be some air at the base of the lung. The upper portion of the lung appeared clearer than the rest. There was a marked displacement of the heart and mediastinum to the right. The roentgenologist interpreted the film as being possibly an old empyema.

Several attempts were made to aspirate the chest but were unsuccessful. The child's temperature ranged from

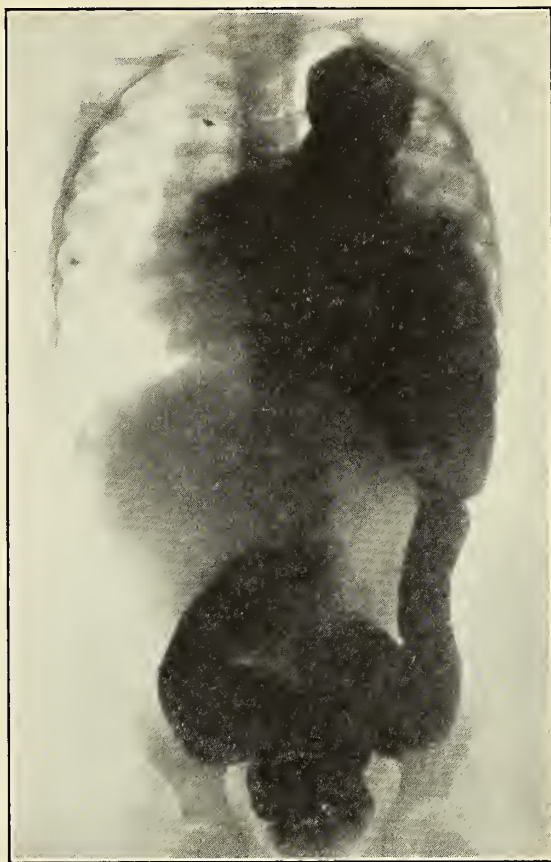
normal to 103 degrees on some days and he developed an acute otitis media. At times he would vomit for several minutes. Then he would not eat very much for several days. There would be spells of constipation and then diarrhea. Repeated chest x-rays did not change in appearance. Gas sounds were heard in the lower part of the left chest.

I saw him first on November 2, 1930, and the possibility of a diaphragmatic hernia was suggested.

Fluoroscopic examination following a barium meal disclosed the esophagus displaced to the right. There was some delay of the mixture passing from the esophagus into the stomach. The stomach appeared large and was placed low in the abdomen. Six hours after the barium meal an x-ray plate was made and there was about 50 per cent residue in the stomach.

Examination of the colon following a barium enema showed the left colon along the abdominal wall and lateral thoracic wall with the left colic flexure in the thorax at the level of the first rib. The proximal and distal loops of the flexure appeared to fill practically the entire left pleural cavity. No attempt was made to fill the entire colon since the patient had a great deal of pain from distention of the colon in the thorax. Radiographic examination was thought to be indicative of either a diaphragmatic hernia or a congenital absence of the left side of the diaphragm.

It was then decided to attempt to find out if there was an actual opening in the diaphragm or if there was a congenital absence. A small amount of air was injected into the abdominal cavity. Anterior and posterior views in the standing position were made which showed a good outline of both kidneys and liver. They seemed to be normal in size and shape and were in their proper places. No definite abnormality of the stomach could be made out. Apparently no air extended through the diaphragm into the chest proper. There was no evidence of collapse of the lung. The patient became cyanotic and restless after the administration of a small quantity of air and the procedure had to be stopped short. This



CASE NO. II.

x-Ray of No. II after a barium enema showing the left colon along the abdominal wall and lateral thoracic wall with the left colic flexure in the thorax at the level of the first rib.

was enough proof that there was probably a diaphragmatic hernia present and not a congenital absence of the diaphragm.

The parents of the child would not consent to an operative procedure and they removed the child from the hospital and I have not seen him since.

CASE NO. III.

The patient entered the hospital, November 30, 1929, at 11 p. m. with a history of having been injured in an automobile accident about one hour previously. He complained of pains in his left chest, arm and head, and shortness of breath. He was not very informative.

Physical examination revealed a strong, robust male negro forty-six years of age. The pulse rate was 120 per minute, temperature 98 degrees, and respiratory rate 30. He was apparently under the influence of alcohol. There was ecchymosis of the eye lids and marked

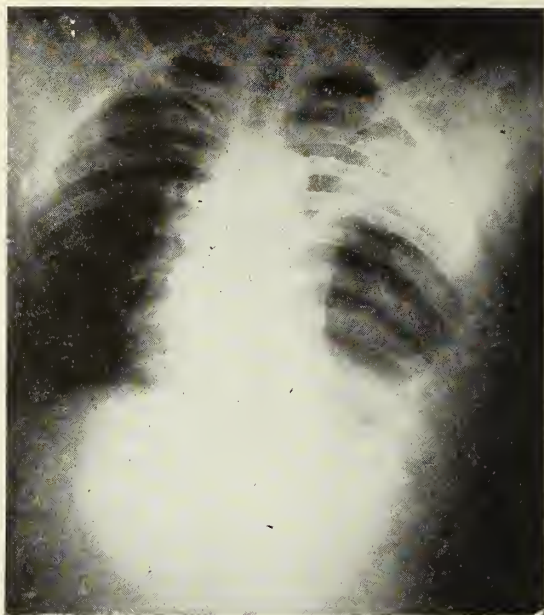
conjunctival ecchymosis of the right eyeball. The pupils were equal and reacted. There were numerous small lacerations on the face. The left chest appeared sunken and air crepitis was felt throughout that side, extending up into the neck and down the abdomen, as far as the umbilicus. Light percussion revealed a hyper-resonant note throughout the left side of the chest, anteriorly up to the third rib. The heart was apparently displaced to the right. Breath sounds were absent throughout the hyper-resonant area. We felt that the patient had a massive pneumothorax resulting from the fractured ribs.

Examination of the left arm revealed a fracture in the middle third. Numerous contusions and small lacerations over the body were found. Otherwise negative.

Because of the patient's general condition the treatment consisted of strapping the left chest, placing the arm in a plaster splint, and a back rest for orthopnea. Likewise measures were used to combat shock.

Nine hours later his general condition had improved. The shock had disappeared but the patient was very uncomfortable. An *x-ray* examination of the chest showed what was thought to be either a diaphragmatic hernia or even-entration of the diaphragm, the shadow extending up to the level of the second interspace. The second to the ninth ribs on the left side, medial to the posterior axillary line were fractured. The left border of the heart was displaced to the right of the sternum. Inspection showed the point of maximal intensity of the apex beat, in the right fourth interspace, one and one-half inches medial to the nipple line. Breath sounds were absent anteriorly and in the axillary line, below the third rib. Amphoric breathing was heard posteriorly up to the seventh rib on the left side. Gas sounds were heard in the base of the left chest posteriorly. Cyanosis and dyspnea had disappeared. Apparently no digestive disturbances or obstructive signs were present which would suggest the protrusion of a viscus through a diaphragmatic opening. Symptomatic treatment was continued.

The patient's general condition im-



CASE NO. III.

x-Ray No. I. On admission, showing dilated stomach in chest cavity.

proved gradually. The subcutaneous emphysema disappeared and he could lie flat in bed. At this time impaired resonance was discovered in the left chest posteriorly, near the base in the axillary line. On December 18, 1929, he was given a barium meal, and barium in the stomach reached to the level of the third rib anteriorly. The small and large intestines were visualized below the diaphragm and there was evidence of considerable pleural thickening with a small amount of fluid above the diaphragm. With these findings we were convinced that we were dealing with a ruptured diaphragm.

On December 21, 1929, percussion revealed flatness in the left chest. There was no respiratory embarrassment. A chest *x-ray* December 31, 1929, showed complete opacity in the left chest. The chest was aspirated and 1000 cc. of straw colored fluid was removed within two days. We were unable to obtain any more fluid from the chest on following attempts. The *x-ray* taken January 22, 1930, showed only a small amount of fluid in the left pleural cavity, with almost complete clearing of the left lung field. At this time the patient was told his diaphragm was thought to be ruptured and repair was essential, but he



CASE NO. III.
x-Ray No. II showing left pleural effusion

refused surgical intervention.

The patient had been operated previously by Dr. Verne Hunt of the Mayo Clinic for chronic appendicitis. A communication from Dr. Hunt assured me that no congenital deformity of the diaphragm existed at the time of the appendectomy. A chest plate made at the Mayo Clinic was normal.

The patient was allowed to go home February 7, 1930, in fair physical condition feeling strong and not dyspneic. The heart had changed its position very little. There was marked clearing of the percussion note in the left base and distant breath sounds were heard here. A chest plate revealed the lung clear with the position of the diaphragm and mediastinal structures as previously reported.

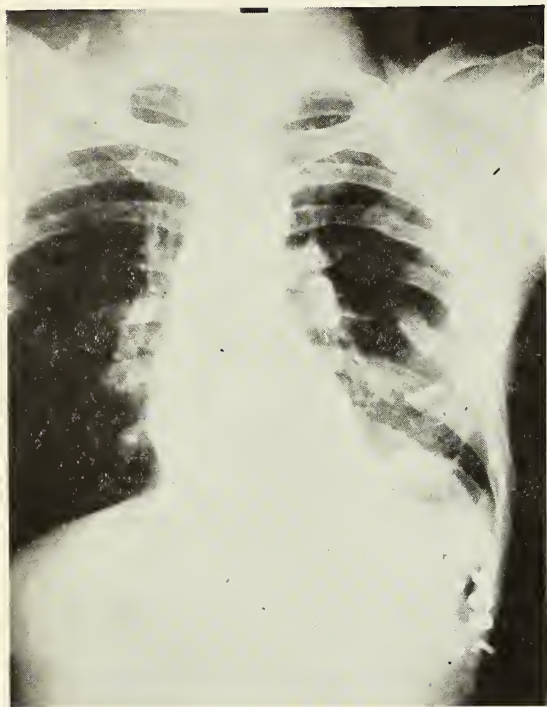
He returned monthly for examination complaining of belching and loss of appetite. On May 4, 1930, he had attacks of gripping abdominal pains and distention of the abdomen. After a similar attack he reentered the hospital on June 3, 1930, seeking relief. He consented to be operated, but owing to his run down condition, the operation was deferred until he was in a better physical condition.

June 16, a pneumoperitoneum was carried out and x-ray and fluoroscopic examinations made. This revealed def-

inite evidence of herniation of the stomach and a portion of the large bowel, through the diaphragm. The passage of air into the left pleural space from the abdomen produced practically a complete collapse of the left lung. The patient complained of great chest pain during and after the injection of air into the abdomen.

June 18, I explored the abdomen through a left rectus incision, under spinal anesthesia. There was a hole in the diaphragm about four inches in diameter, which extended medially to the esophagus. Through this opening, about half of the small intestines, a portion of the transverse colon and the major portion of the stomach were protruding into the pleural cavity. The small intestines could be reduced into the abdominal cavity, but there were adhesions between the stomach, colon and the diaphragmatic opening. The adhesions were very tough and could not be loosened through the abdominal route. So the left ninth rib was resected from the costo-chondral junction, posteriorly, for a distance of about six inches and a chest retractor was placed in. This procedure allowed a very good exposure. The stomach was found adhered to the left lower lung lobe. The adhesions were separated by dull and sharp dissection. The stomach and other abdominal organs were replaced and the diaphragmatic opening sutured through the chest opening with two layers of double chromic catgut, with one layer of heavy silk on the pleural side. The chest cavity was thoroughly wiped out and closed. Then the abdominal wall was sutured after assuring ourselves that the stomach and other viscera were intact. Then the left phrenic nerve was crushed in the neck so as to place the sutured diaphragm at rest.

The patient had several stormy and uncomfortable days, but he made an uneventful recovery. The lung inflated itself promptly. A small amount of fluid formed in the chest, which persisted for a number of weeks. At one aspiration only 10 cc. of blood tinged fluid could be removed and no further attempts at aspiration were made. The patient has been examined frequently since the operation



CASE NO. III.
x-Ray No. III six months after operation, showing abdominal viscera below diaphragm.

and he has had occasional pains in his left upper quadrant. There have been no signs of obstruction. Digestion is good. At the last fluoroscopic examination in December, 1930, six months after operation, the diaphragm was immobile. The abdominal viscera were below the diaphragm. The patient has returned to his former occupation and is able to do moderately heavy work, as a janitor.

CONCLUSION

A. Case No. I, was a patient without previous history of accident or antecedent symptoms which would suggest a diaphragmatic hernia. Another feature occurred here from which the best of surgeons do not escape: that is, pulmonary embolism and infarction.

B. Case No. II had a hernia which was probably of congenital origin and was a poor risk for surgery because of such a prolonged sickness.

C. Case No. III presents some very interesting features:

(1) There was severe trauma resulting in fracture of eight ribs on one side and the left arm; massive subcutaneous emphysema, rupture of diaphragm with a

resulting diaphragmatic hernia and collapsed lung.

(2) The formation and retention of fluid in the pleural cavity. The adhesions between the abdominal viscera and the edges of the ruptured diaphragm in all probability prevented the pleural fluid from escaping into the peritoneal cavity.

(3) The recovery following such extensive trauma and the subsequent major operative procedure.

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HUMAN SARCOSPORIDIOSIS—CASE REPORT*

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Wellington, Kansas

Sarcosporidial infection in man is apparently rare. E. R. Stitt says that only three authentic cases have been reported, of which Darling reported two—one in 1919, and another in 1920. Baraban and St. Remy reported the first case in 1894. However, there seems to have been a few more cases reported: one by Vasudevan in 1927; one by Lambert in 1927; one by Naidu in 1928; one by Scoglia, and one by Askanazy, both in 1930.

In most of the reported cases the parasite has been found at autopsy, and has seemed to be of little pathological importance; death having been caused by other diseases. In fact, Darling states that the infection is probably of little or no pathological importance in man, but as an example of what may be the lodgment of a sporozoon in a biological blind alley it has some interest.

Vasudevan found the sarcocysts in an ulcer on the chest wall, but is uncertain whether the ulceration was due to the parasite or whether this was merely a chronic ulceration over the muscle infected with the parasite. He does not describe the clinical course of the case. In Naidu's case also the parasite was found in an abscess of the chest wall.

E. R. Stitt says that sarcosporidia are sporozoa found in the striped muscle of various mammals and birds. The pres-

*Read before the Sumner County Medical Society, at Wellington, June 16, 1932.

ent view is that we have only one genus of these parasites, viz., *Sarcocystis*. The life history is unknown. They are common in the pig and mouse.

In Baraban's and St. Remy's case the laryngeal muscles at autopsy were found to show cysts about one-twelfth of an inch long, which contained sickle shaped sporozoites about nine micron long. They are known also as Miescher's tubes. When in muscle fibers these Miescher's tubes or sarcocysts are elongated, tubular bodies which distend the muscle fiber. They are filled with sickle or oval-shaped spores from seven to fifteen microns long and three to four microns wide. These spores lie in masses which fill the numerous chambers into which the sarcocyst is divided by partition-like walls. There is an enveloping capsule for the sarcocyst which may show striations. In some localities more than 50 per cent of the sheep and pigs may show infection. It is never parasitic for invertebrate hosts, and while occasionally found in birds and reptiles it is preeminently a parasite of the higher vertebrates.

Mr. H. H. H., white, male, age 55, married, occupation farmer, family history negative. Came into the hospital on February 6, complaining of general weakness, generalized muscular soreness, nervousness, loss of weight, loss of appetite, mental confusion and depression. First began to feel badly about three months ago. At the time he was taking injection treatment for hemorrhoids and attributed his illness to this. However, he continued to grow worse, growing gradually weaker. Lost about thirty-five pounds. Past two weeks extremely nervous and depressed, cries easily, mentally sluggish, some disturbance of vision past few days, particularly dimness of vision and diplopia. Has generalized muscular soreness,

particularly of extremities, which has been getting worse for past two weeks.

PAST HISTORY

Usual diseases of childhood, good recovery. No other illnesses of note; has always been healthy. No surgical operations or injuries. Thinks he had malaria two years ago.

Head and Neck: Frontal headache constantly for past few days. Has been unable to walk straight. No head noises. Vision, before onset of present illness, good. Uses glasses for reading. No sinus infection. Ears normal. No earache or running ears. Teeth in fair condition. No sore throats.

Cardio-respiratory: No cough, fever, pain, or hemoptysis. No dyspnea, oedema, palpitation or pain.

Gastro-intestinal: Appetite good previous to present illness, digestion good. Is lover of raw meat. Usually keeps beef or mutton in back porch and says frequently as he goes out of house will cut off piece of raw meat and eat it. Bowels regular. No rectal trouble at present. No genito-urinary symptoms.

PHYSICAL EXAMINATION

Well developed and fairly well nourished white male who appears somnolent and sluggish. Seems to have difficulty in comprehending questions. Cerebrates poorly. Temperature 98 2/5, pulse 80, blood pressure 110/70, weight 130 pounds.



FIG. 1

Section of beef muscle containing sarcosporidia.

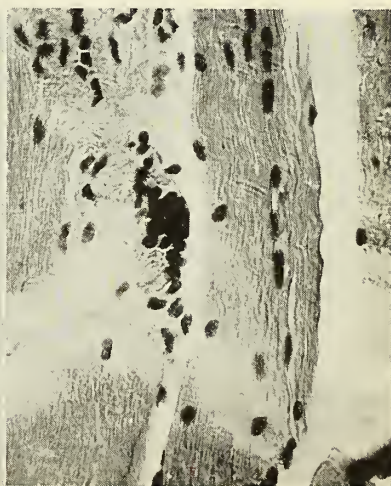


FIG. 2

Section of gastrocnemius muscle, taken soon after patient was admitted to the hospital, showing sarcosporidium.

Head: normal. Eyes: pupils equal; react to light and accommodation. Mucous membranes: normal. Nose and ears: normal externally. Mouth: tongue coated; mucous membrane appears normal. Teeth: several missing; gums spongy and retracted. Throat: normal. Neck: normal. Chest: expansion equal. No atrophy or spasticity. Percussion note normal throughout. Crackling rales in base of left lung. Heart: normal. Abdomen: normal. External genitals: normal. Rectal: sphincter spastic; two small internal hemorrhoids. Prostate: normal.

Considerable tenderness on palpation in muscles of all extremities.

Central nervous system: general muscular weakness; no paralysis. Sensory normal. Examination rather unsatisfactory due to mental condition. Superficial and deep reflexes present and normal. Romberg: positive. Skin: several small papules and pustules seen over face, chest and over arms. Cloasma over extremities.

Examination of eyes with ophthalmoscope reveals normal retina and nerve heads.

LABORATORY

Blood count: hemoglobin 90 per cent, red blood cells 4,540,000, color index 1, white blood cells 6,800, polymorphonuclears 33 per cent, small lymphocytes 42 per cent, large lymphocytes 4 per cent, eosinophiles 20 per cent.

Blood Wassermann negative. Urine

showed small amount of albumen, and few pus cells. Feces normal. Spinal fluid clear. Positive globulin, faint trace sugar, no cells. Blood urea 25.7 mg. per 100 cc. blood. Spinal fluid Wassermann negative. Colloidal gold curve negative.

While in hospital patient continued to show mental confusion, sluggishness and to complain of muscular soreness. The increase in eosinophiles, suggested a parasitic infection which we thought likely to be a trichinosis, a small section of gastrocnemius muscle was removed for examination.

PATHOLOGICAL REPORT BY DR. C. A. HELLWIG

Gross Appearance: small triangular specimen, about 3 to 4 mm. consisting of muscle. There are under the magnifying glass small gray spots visible.

Microscopic findings: in several sections typical lesions are found. Within the muscle cells oval cysts with indistinct capsule are found which contain 10 to 20 darkly stained oval spores. Their size varies from 8 to 12 micron, the cytoplasm is not well defined, but the nucleus is very deeply stained. The sarcoplasm of the enclosing muscle fiber is lighter and granular around the parasite. In a few sections, the parasitic cyst is lying free in the stroma, apparently due to necrosis of the muscle cell. There is no inflammatory reaction around the parasites.

Pathological Diagnosis: Sarcosporidiosis.

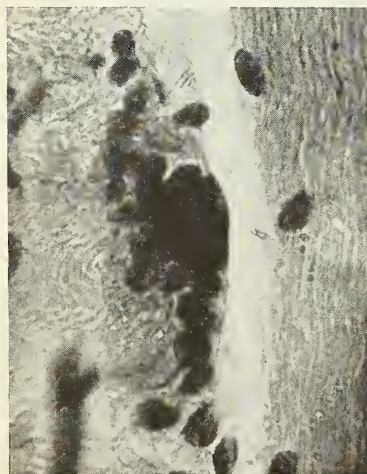


FIG. 3



FIG. 4

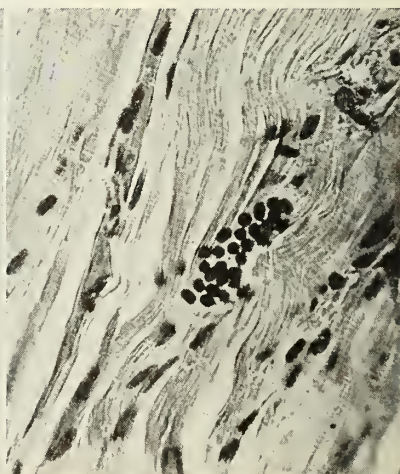


FIG. 5

Same section under higher magnification. Section of biceps muscle examined June 9. Same section under higher magnification. —Photographs furnished by courtesy of Dr. C. A. Hellwig.

Due to the patient's mental condition I had Dr. L. C. Bishop in consultation. He considered the mental condition as a toxic confusional insanity.

On February 16 patient had a severe chill; temperature going up to 102.8, this being the first elevation of temperature following admission. Although we were unable to find malarial parasites in the blood smears the patient was started on quinin due to the fact that he gave a history of having had malaria previously. This was before we had received the pathological report. During the next few days he seemed to improve considerably; mental condition and appetite improved, and did not have any more chills or elevation of temperature.

Upon receipt of the pathological report, we decided to use neo-arsphenamine in the hope that it might be of some benefit. Accordingly he was given .45 of a gram every five days until discharged from the hospital on March 8. He had shown steady improvement, gained in strength, mental condition cleared up entirely except for occasional periods of depression, practically no muscular pain or soreness, and at the time of discharge, after 33 days in the hospital, was able to walk to meals and bathroom. Weighed 145 pounds. After discharge continued to show improvement. Gained in weight steadily up to 162 pounds.

When last seen on June 1 was complaining of some muscular soreness and pain in joints. General condition remains good. Eosinophilia ranged from 27 per cent to 8 per cent on June 1, 1932.

Section of biceps muscle examined on June 9, 1932.

Gross Appearance: The excised muscle piece measures 1 x 0.3 cm. With the unaided eye no pathological changes are found.

Microscopic Findings: The whole specimen is sectioned for series section. Only in two slides typical lesions are found. There are within the muscle cells groups of 20 to 25 darkly stained oval bodies. The cytoplasm of these spores is very light, the nucleus is deeply stained. There is not a very definite capsule around these spores, but the sarcoplasm, enclosing the parasites is lighter and

without striation. No definite inflammatory changes are found.

Pathological diagnosis: Sarcosporidiosis.

CONCLUSIONS

1. Sarcosporidial infection is very rare in humans.
2. The above case is one in which the parasite seems to have been the cause of a definite symptom complex; no other cause having been discovered for the patient's illness.
3. Sarcosporidia are possibly more pathogenic for man than was formerly believed. That it may be more common than is believed at present.
4. Cattle, sheep, and hogs should be more closely investigated for evidence of this infection.
5. It seems the disease may be acquired by eating infected meat; which was probably the mode of entrance in this case.

—————R—————

DeWan's Depilatory—For some time past there has been an aggressive advertising campaign for a product called "DeWan's Permanent Hair Remover." DeWan's Laboratories, Inc., was incorporated under Illinois laws in the spring of 1932, but apparently did not become active until September, 1932. Earlier, the company exploiting the DeWan preparation was the Saint Aubin Corporation at 43 East Ohio Street, Chicago. Later this became the DeWan Laboratories, Inc., at the same address. Still later this became the DeWan Laboratories at 11 East Austin Avenue, Chicago, while the latest name is DeWan-Hollywood Laboratories, Inc., Hollywood, Calif. The DeWan depilatory has been heavily advertised under the names of various department stores. These large and expensive advertisements are said to have been paid for by the DeWan concern itself. Analysis shows that the DeWan preparation is just one more of the innumerable alkaline sulphides with which the depilatory field is flooded. Alkaline sulphides have the power of dissolving hornlike substances such as hair, and obviously anything that is powerful enough to remove the hair may easily be powerful enough to remove the skin. The A.M.A. Chemical Laboratory was asked to examine the DeWan preparation. Qualitative tests indicated the presence of sulphides, sulphate, chlorides (trace), starch, zinc, strontium, calcium and sodium (trace). Barium, magnesium, potassium and thallium were not found. The report of a petrographic examination indicated the presence of zinc oxide, strontium sulphide, and a relatively large amount of orris root (starch). The newspaper advertisements and the advertising that accompanies the trade package speak of "rare oils and secret ingredients which do not kill the root but sterilize it so it cannot reproduce." It is a sorry commentary on the public's intelligence that this sort of buncombe can appear in the public prints and that supposedly reputable newspapers and department stores will, for the money there is in it, give publicity to such nonsense. (Jour. A.M.A., February 18, 1933, p. 515.)

ORAL SEPSIS AND TOOTH INFECTION*

L. C. EBERHART, D.D.S.

LaCrosse, Kansas

Oral sepsis is one of the most prevalent sources of disease. The term, oral sepsis, is applied to any pathologic or diseased condition within the mouth which may give rise to the liberation of toxins and thereby affect the general health. Teeth, tonsils, mouth, pharynx, larynx, ear, sinuses and glands may all be sources of oral sepsis.

The effects of oral sepsis have been known for years. Many physicians and dentists have long advocated giving more attention to the teeth and mouth as a source of disease and have endeavored to show the results obtained by following this method of elimination in individual cases by case history. This can be traced back as far as the Ancient Hindu. In early days ill health was attributed to caries. Pyorrhea was later blamed for most oral sepsis. The periapical aveolar areas is a later discovery, found through the rise of radiograms.

Upon an examination of 6,000 radiograms of 600 patients, all over 20 years of age, 55 per cent had one or more infected apical areas; 53 per cent had one or more infected areas alongside of the tooth, and 78 per cent had one or the other types. In an investigation by Duke, of focal infection or chronic sepsis of any variety, of 1,000 medical cases in general practice, a marked degree of oral sepsis was found in 66 per cent of the cases.

Contributing factors include: lack of proper mouth hygiene, trauma, from fillings, prosthetic appliances, poorly developed teeth having defects, such as caries, and fissures, lack of care of the mouth during acute and chronic general disease, as well as diseased tonsils, adenoids, nasal obstruction, constitutional diseases, minerals, drugs and diet. The most common microorganisms found associated with mouth infections are various strains of the streptococcus group. The mere presence of microorganisms in the mouth does not indicate there is al-

ways active infection as the organisms may be present but cause no disturbance because of resistance of the patient.

Tooth infection is divided into two types, periapical and peridontal infection. The periapical type of infection is thought to be the most virulent because of the enclosure within the bone usually having no free drainage and there being more difficulty of expansion because of the hard surrounding tissues. Chronic periapical abscesses as a rule do not usually give rise to any pain, soreness or swelling. It is only when the case becomes acute that these symptoms occur. Therefore, it is almost impossible to diagnose chronic periapical infection without the aid of the x-ray. This type of infection has no regard for age; it may be found in children as young as 3 years of age, and from then on to old age.

An infection may exist in a root canal or at the apex of a tooth for years when there is an open drainage without any noticeable systemic disturbance, but if this opening becomes closed by any chance, then marked systemic disturbances usually occur. If drainage is again established, the symptoms will often disappear. A large portion of non-vital teeth are the source of oral sepsis. Some mouths have a great resistance against invasion of bacteria and formation of abscesses; while others have no resistance at all. Mouth infection does not always produce periapical bone resorption, and when it does occur may not be of a bacterial origin. An infection from a tooth with drainage does less damage than the same infection would do without a drainage.

Whether the so-called granuloma occurs in patients of high resistance or in patients of low resistance, it is a circumscribed, slow growing area of infection which causes systemic disturbances and heals more slowly after removal than any other type of tooth infection.

The diagnosis of periapical infection is accomplished in most cases by the aid of radiograms. A dying or decomposed pulp may be the focus of infection without definite periapical symptoms. Sometimes a tooth may respond to vitality tests and

*Read before the Rush-Ness County Medical Society meeting at Alexander, September 15, 1932.

still be diseased; therefore, it is not always true that only pulpless teeth have periapical infection. Vital teeth with deep caries may produce systemic disturbances.

The second type of infection is the peridental type, commonly known as pyorrhea. There is a wide difference of opinion regarding systemic disturbances due to this type of infection. Some claim there is more resorption from this type than from the periapical type, due to the fact that where there is one pocket there are several and that the periapical type is usually limited to a small area. On the other hand some claim that the toxins in small areas within the bone tissue without open drainage becomes more virulent. In my opinion from observation it looks like a 50-50 proposition. The only thing is, I believe that patients have a greater resistance to peridental infection than they have to periapical infection.

Pockets in the peridental tissue harbor organisms which pass along the serous and mucous membranes of the alimentary canal giving rise to secondary foci of infection. There is also a direct invasion of infection from these pockets by the way of the blood and lymph channels. However, some claim that the virulent effect of the exudate which passes through the mouth is destroyed by the oral and gasrtic secretions, unless there is a continued irritation from excessive amount of toxin or a lowered resistance of tissue involved.

When resistance becomes lowered, however, even a slight local area is often sufficient to cause systemic disturbances. The percentage of the peridental type of infection is usually found to increase with the age of the patient and very seldom found in children under 15 years of age. Just because a patient has no teeth is no sign there is no infection in the alveolar structure. The residual infection may be caused by leaving granulomatous tissue, infected root apices or foreign bodies, which may cause marked systemic disturbances and should not be overlooked. It is impossible, however, to diagnose an edentulous mouth without the x-ray.

There are three ways by which mouth

infection invades the system: 1, by direct invasion of the adjacent tissues; 2, by passage along the mucous and serous surfaces of the alimentary tract, and 3, through the blood and lymph channels, causing secondary infection in other organs of the body. Acute general disturbances are often associated with acute conditions of the teeth.

The toxic effects of oral sepsis may cause various general disturbances such as diseases of the tonsils, sinuses, ears, eyes, tear ducts, stomach, intestines, appendix, liver, gall bladder, lungs, bronchi, heart, kidneys, joints, muscles, blood and skin. Of course, the general resistance of the patient and local resistance of the tissue attacked have a great bearing upon the toxic effects produced. General resistance against infection may be lowered by any localized infection such as an acute abscess, or tonsillitis, by any general infection such as syphilis, typhoid fever or tuberculosis.

Mouth infection does not always produce systemic disturbances until the resistance of the patient is lowered by old age or some form of disease. The most common disturbances which arise from tooth infection are arthritis, lumbago, headaches, earaches and eye trouble.

Impacted teeth have a great effect on the nervous system. The most common symptoms are nervousness, headaches and eye trouble. Impacted teeth should never be left in the mouth. The removal of teeth should be governed by the resistance of the patient.

We should be very careful in diagnosing our cases for focal infection and determining which teeth should and which should not be removed. Remember, that one tooth in the mouth is worth two in the bridge. One mistake that is sometimes made in examining radiograms is, this tooth has a slight infection, or there is practically no infection in that one, or here is one with a slight irritation around it, and you had better watch this one for it might have to come out later. A tooth is either infected or it is not infected and either has to be removed or it does not have to be removed. I have reference to periapical infection. Just because a radiogram does not show a

dark area the size of a pea at the apex of a tooth is no sign that it is not infected.

We should remember that the loss of teeth cause impaired masticatory efficiency, elongation of opposing teeth, tipping of teeth, resorption of surrounding tissues. Therefore, we should not attempt to sacrifice teeth without regard to their usefulness and positive assurance that they are causing general disturbance. Since it has been proven that infected teeth may be the cause of systemic disturbances, it becomes necessary to be able to effect a positive cure to remove them. There is no classification or set of rules to follow, so we will have to use our own judgment in handling the case.

The removal of teeth should receive careful consideration. Where resistance is low or impaired it is best to remove all other possible foci of infection first. Since oral sepsis is but a part of focal infection, it must be remembered that oral sepsis is not responsible for all general disturbances due to infection but other focal areas must be carefully examined. It has been proven that 61 per cent of systemic disturbances originate from infected teeth either directly or indirectly. Other focal areas may also be the cause of tooth infection but infection of the teeth always aggravate any disease whether it is the cause or not. Also bear in mind even if teeth are the source of systemic disturbances, their removal does not always effect a cure.

In conclusion, I wish to say there is need for a closer co-operation of the dental and medical professions in handling properly the problem of the effects of the oral sepsis and the general health of the patient. You need our assistance and we need yours.

—B—

Excluding the possibilities of dangerous complications, sinusitis in itself is a painful disease from which the patient suffers severe headache and pain in the face in addition to the usual symptoms of a bad head cold. It is a disease well worth preventing by avoiding head colds, by using a mixed diet with plenty of milk, cream, butter, raw fruits and vegetables, by adding cod liver oil to the winter diet, by obtaining plenty of fresh air and sunshine and by forming good health habits in general. If sinusitis does occur, it is most wise to place oneself in the hands of a capable physician to avoid serious complications, Louis Klein-feld suggests in Hygeia.

A SUPRACLAVICULARIS PROPRIUS MUSCLE

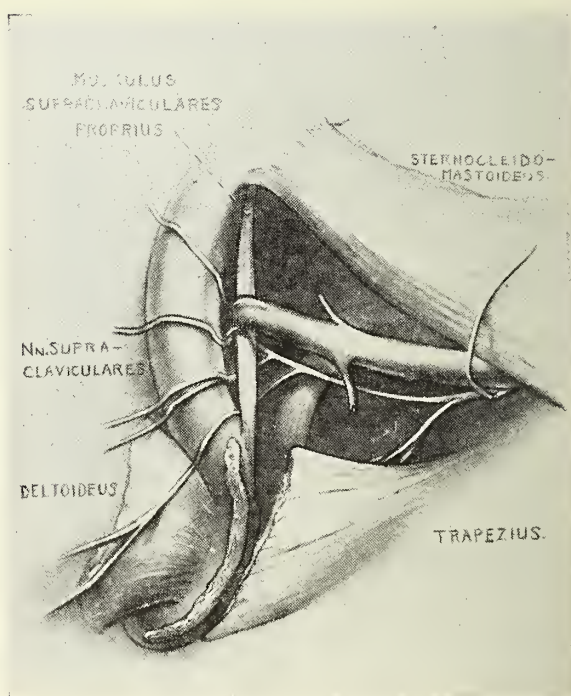
HOMER B. LATIMER, Ph.D.*

Lawrence, Kansas

The infrequency of the supraclavicularis proprius muscle or the tensor fascia colli, as it is called by Testut ('84), seems to warrant a brief description of this case. The muscle was found by two students, Mr. Archie Butcher and Mr. Herman F. Janzen and credit is due them for recognizing its very unusual character.

The muscle was found in the cadaver of a white male, 51 years old. He had been a laborer at a county poor farm, and died of coronary thrombosis with myocarditis as a contributory cause. The body was in good shape, was well nourished and well muscled.

The muscle and the adjacent structures, drawn from above and behind, are shown in the accompanying figure. The



DESCRIPTION OF FIGURE

Fig. 1. The supraclavicularis proprius muscle and adjacent structures. Drawn from above and slightly posterior.

left clavicle to which this muscle was attached, measured 182 mm. in length and

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the muscle had a total length of 105 mm. and a maximum diameter of 6 mm. The medial end was attached to the postero-superior surface of the clavicle 35 mm. from the sternal end and slightly (5 mm.) behind the lateral border of the clavicular head of the sternocleidomastoid muscle. The posterior end was attached to the posterosuperior surface of the clavicle 47 mm. from the lateral end and on the most posterior part of the flexure of the lateral third of the clavicle. The posterior end of the muscle was overlapped for about 35 mm. by the trapezius muscle. The belly of the muscle was nearly circular in transverse section. Unfortunately the nerve to this muscle had been destroyed before the muscle was discovered.

The attachment of the muscle to the concave side of the clavicle left a space of about 4 mm. between the belly of the muscle and the bone, and through this passed the external jugular vein, and the supraclavicular nerves. The vein passed downward anterior to the muscle and then between the muscle and the clavicle and on posteriorly and inferiorly to empty into the subclavian vein in a normal manner. The nerves passed inferiorly, deep to the muscle and then came out between it and the clavicle, taking their normal course over the clavicle and onto the chest wall.

At its lateral end, the attachment of the muscle was intermingled with the insertion of the trapezius. Throughout the entire length of muscle its sheath was connected with the superficial layer of the cervical fascia. This fascia is not shown in the drawing as it had been completely removed by the dissectors. So far as the dissectors can recall there were no other muscle anomalies except that the platysma on the left side seemed tougher and more intimately connected with the underlying fascia than normally.

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UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Newer Physiology of the Gastrointestinal Tract

ARTHUR C. CLASEN, A.B., M.D., F.A.C.P.*

The purpose of this paper is to give some recent views in regard to the physiology or conduction of impulses along the wall of the intestinal tract and to emphasize Alvarez's new gradient theory of intestinal peristalsis. The term gradient is only an expression of relationship. The gradient of a railroad is the degree of incline of the railroad track. In studying the flow of liquids along gradients of gravity, one must visualize a gradient of pressure or force produced when material is carried through a muscular tube. If a certain point of muscle in a tubular organ is stimulated, we obtain a contracted tonic ring from which waves are given off in both directions, similar to the concentric ripples at the point where a stone has been thrown into water. The level or potential is raised at one point and waves flow down away from that region until an equilibrium is maintained. If a second tonus ring is made in the bowel, the waves approaching the first ring are blocked, for they must run up hill to this second area of high potential. The waves spread out from muscle fibre to muscle fibre without need of main nerve trunks, ganglia or centers. It is now well recognized these waves are conducted along the nerve fibers in Auerbach's plexus.

The basic principle of these waves is the cause of downward passage of food. Several theories regarding peristalsis have been propounded. Keith's theory is that food is propelled through a series of zones or segments, each furnished with its own pace maker and its own rhythmical contractions, arising from nodal tissue or special cells which are intermediate between muscle and nerve, associated with Auerbach's plexus. As Alvarez has shown Auerbach's plexus is made up of a short chain of nerves

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containing synapses, which conduct the current or impulse mainly downward. Any disturbance of these synapses may be one of the factors in the production of paralytic ileus. In the heart the region with the fastest rate sets the pace for the others. The same is true in the stomach. The area with the most rapid rate at the cardia appears to set the pace and we can see the waves traveling slowly to the pylorus. In the small intestine each segment tends to contract at its own rate, and only occasionally do we see what are called peristaltic rushes, running some distance down the bowel. Bayliss and Starling's theory is that there is contraction above and inhibition below the stimulated point of the bowel. Alvarez contradicts this statement. He found there was a contraction above and below the stimulated point, and that the stimulation at any point caused a retardation of material coming down from above and a hastening of material below. He likewise found that there was a distension of the bowel which preceded the food. This distention is caused by a long column of intestinal contents which is forced ahead by the weight of the contraction, such as a train of cars that is pushed up a grade by an engine at the rear. The old conception is that this is an inhibition rather than a distension. If these contractions are marked they form what are called peristaltic rushes.

Rushes can jump gaps or obstructed places anywhere in the bowel. A rush wave will go on down the bowel after it has left the burden of its contents behind, and the contents will then pick up a new rush wave and continue to repeat the process. If a segment is partially occluded or if the bowel is bisected and glass tubing interposed, the wave will proceed and pass over the glass tubing or obstruction. This is due to the column of contents which travels ahead of the contraction ring. When a wave is once started in one direction it must continue in that direction so long as the bowel is irritable enough to respond to the column of fluid, and as long as the resistance ahead does not become too great. The rushes travel caudad for the same reason that water flows downhill in a pipe. On

account of the presence of the gradient it is difficult for the wave in the muscle to run orad, and it soon fades out. The caudad wave, running with the gradient, gathers momentum and runs faster the farther it goes.

There are three types of movements of the small intestines:

Rhythmic segmenting movement.

Swaying or pendulum movements.

Peristaltic rushes.

Rhythmic segmentation is brought about by localized rhythmic contraction of the circular muscle generally in the duodenum and jejunum. Contractions knead the contents, mix them with the digestive juices and spread them over the absorbing surface of the mucous membrane. Then constrictions occur at regular intervals along its length and cut the mass into little ovoid pieces. A moment later each of these segments is divided into two particles, and immediately after the division neighboring particles rush together and merge to form new segments. This kneading process will continue in one place for an half hour or more without causing much, if any, downward progress of the material, and then the loop will either quiet down for awhile or a rush wave will come along to carry the contents onward into the lower bowel. These contractions occur about twenty per minute.

Pendulum movements. The swaying or pendulum movements, during which the contents of a short loop are thrown from one end to the other, serves as a local mixing of the material with digestive juices. The rate of the movements in the duodenum is about twenty per minute and in the ileum about ten per minute. Most of the forwarding of the intestinal contents is brought about by large waves which run down the bowel. They arise in any part of the small bowel and may run either short or long distances. These waves were first discovered by Meltzer. About half of these waves or rushes appear in the duodenum about the time that a gastric wave reaches the pylorus. Often after the departure of the rush, the stomach seems to be inhibited for a short time, even if the rush starts low in the bowel. The stomach need not empty any

of its contents into the duodenum to start these rushes. Often duodenal contraction appears a few seconds before the gastric waves reach the pylorus. The filling of the duodenum does not always start a rush, which can begin anywhere in the bowel. A loop fills from above, the tone rises, and the amplitude of its rhythmic contractions increases. The material within is thrown backward and forward more forcibly by the two ends of the loop, which may start a rush. Often a ripple or rush will come on down from the stomach to upset the balance or to give the necessary impetus, or the balance may be disturbed by the emptying of a loop lower down. By a combined process of kneading and peristaltic advance, the food is brought to the ileocaecal valve. One of the most important functions of the ileocaecal sphincter is to stop the rushes, otherwise diarrhea might ensue. The peristaltic rushes do not always carry the intestinal contents along. They may carry them only a short distance and then drop them only to pick up material farther down.

When the rushes first start the rate of travel is about four cms. per second and at the ileum the average is ten cms. per second. Liquids may run long distances without the aid of any peristaltic contraction if there is no gas present to distend and kink the bowel. Solids on the other hand are unable to do this. Hence, the fallacy of giving a solid diet containing large quantities of indigestible cellulose.

In the herbivora or omnivora, the colon acts as a reservoir wherein cellulose is broken up by bacterial fermentation. It absorbs some of the fine products of digestion and returns water to the blood. In man the colon serves as a reservoir in which wastes can be held until such time as it can be voided. The contents of the colon increase in consistency as they advance from the cecum to the rectum. The rounded masses are pushed into the rectum like cars on a track. In the colon there are mass movements. The material coming from the ileum is pushed ahead without the aid of peristalsis. The haustrations disappear and the fecal material

runs together into a sausage like bolus. A contraction appears and within the next four or five seconds it pushes the mass over into the descending colon. This conduction may be secondary to a rush wave in the small bowel. If defecation is postponed the fecal material can pass back into the colon, where it is held quite firmly as a mass. In the ampulla, the fecal masses are collected and are forced through the relaxed anal canal by the combined efforts of the rectal and abdominal musculature, including the diaphragm. The levator ani at the same time aids by pulling the anal canal up over the material. Frequently, when there is disease of the lower bowel such as a proctitis, fissured anal ring, hemorrhoids or inflamed crypts, there is a reversal of the rectal gradient with a resultant constipation. As a consequence of this recent knowledge of the physiology of the intestinal tract we have radically changed bowel therapy from an empirical method to one of scientific management.

—————R—————

JAMES MANN WRIGHT, M.D.

James Mann Wright was born July 14, 1870 and died at his home in Denison, on February 18, 1933.

Dr. Wright graduated from the Kansas Medical College in 1902. For fourteen years in Tak Hing, South China, he labored as a traveling physician and in the hospital. He was consulting physician on the staff of the Canton Medical Missionary Union and associate professor in the medical schools of Canton. He was a Fellow of the American College of Surgeons.

In 1928, Dr. Wright returned to the United States on account of unsettled conditions in China. He practiced general medicine in Denison until the time of his death.

Dr. Wright was a member of the Jackson County and Kansas Medical Societies and of the American Medical Association. At the time of his death, he was president of the Jackson County Society.

C. A. WYATT, M.D.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

The modern physician appreciates that whenever a case of tuberculosis is discovered every contact should be examined. To support him in this practice tuberculosis associations throughout the country are this year striving to focus public attention, through the medium of an educational campaign, on the communicability of tuberculosis. The slogan is, "Tuberculosis—From whom did he get it—To whom has he given it—Examine and protect every contact." Incorporated with these words is an illustration showing a doctor examining an *x*-ray plate to suggest also the necessity of relying on this instrument of precision for making the diagnosis. One of the active crusaders of this educational movement is J. Arthur Myers of the Department of Preventive Medicine and Internal Medicine, University of Minnesota. Space permits only a few quotations from his William Snow Miler lecture, bearing on the communicability of tuberculosis.

Examining Tuberculosis Contacts

The slogan of last year's tuberculosis educational campaign, "Tuberculosis causes tuberculosis—every case comes from another," tells the whole story, namely, that tuberculosis is a communicable disease. (The 1933 slogan is a repetition, with slight modification, of the same idea.) The recognition of this fact has done more to change conditions with respect to the incidence of tuberculosis than all of the steps that have been taken toward the control of this disease. The unfortunate fact remains that, although we have known the disease to be communicable, we have not always used this knowledge in the expenditure of funds and in the dissemination of publicity intended for tuberculosis control.

Now that we have been compelled to learn a good part of our tuberculosis over again, we are visualizing its control

as never before. Optimism is being expressed everywhere by those who have carefully followed the recent developments in our knowledge of tuberculosis. The following practical applications of the recent developments give us an idea of what is possible and justify much optimism:

Dr. Hilleboe became curious about the tuberculosis status of 60 children four years old and under who were enrolled in a nursery school. He applied the intracutaneous tuberculin test and found that four of them were positive reactors. Since every case comes from another, he began searching among their associates. An early revelation was that two of the teachers had tuberculosis, one definitely of the adult type. Members of the families of these children are now being studied for tuberculosis. Finding the source and ending the exposure is the best treatment for the children. Treatment of the patients who infected the children may begin much earlier than it would have without such an investigation, and such treatment should be the means of saving large numbers of other persons from unsuspected exposure.

Simons and Hilleboe applied tuberculin tests and *x*-ray examinations in a case-finding endeavor in a small rural community with the result that 19 new cases of tuberculosis were discovered. When they enlisted the support of the veterinarians 18 cows supplying milk to the community were found to be infected. Gibbons has done similar work in another rural community. If their work is continued, and tuberculin-testing is more generally applied to the children of the community at six- to twelve-month intervals, the time will be near at hand when the advanced case of tuberculosis will no longer be found in the community and when tuberculosis in any stage will be a rare disease.

Overcoming Diagnostic Difficulties

There have been two stumbling blocks in our present program of tuberculin-testing and *x*-ray examinations of positive reactors as a case-finding measure. The first is the objection presented by parents and others to instrumentation

in the administration of tuberculin. In the hands of most workers the Moro test has not proved as accurate as the Pirquet test. However, Lovett has called attention to the percutaneous test, which consists of rubbing the skin with ether until hyperemia appears, in an attempt to remove the oil from the pores. Then a preparation containing tuberculin is rubbed into this area of skin. She finds this test fully as accurate as the Pirquet test but not as accurate as the Mantoux (intracutaneous) test.

The second stumbling block has been the cost of *x-ray* films. If one wished to make a tuberculosis inventory of 25,000 school children or 10,000 university students, the cost of the *x-ray* films alone was stupendous. As an example of the attempt to solve this difficulty may be cited the experiment of the Queensboro Tuberculosis and Health Association which stimulated a manufacturer to develop a paper *x-ray* film on rolls. With the special equipment devised it is possible to make a thousand chest exposures in a single day with one machine.

In applying this case-finding method to university students, Diehl calls attention to examinations of 2,500 entering students in the fall of 1931. Among approximately 800 reacting positively to tuberculin and having *x-ray* film examinations of the chest were found 15 cases of adult type of pulmonary tuberculosis in addition to many cases of pleurisy and childhood type of tuberculosis. One of the cases with adult type of pulmonary had advanced disease, five were moderately advanced, and nine were minimal. The control of these cases with reference to dissemination of tubercle bacilli on the campus, as well as individual treatment of the cases, is a service worth much more than it costs the institution and the student body. The fact that more than a half-dozen great American universities instituted similar tuberculosis-finding procedures in the fall of 1931 is of great significance.

Sanatoria are beginning to employ full-time epidemiologists, whose duty it is to work with family physicians of patients admitted to their institutions in

finding the source of their patient's disease. Moreover, they place under examination and observation those persons who have been in contact with their patient. This procedure at the Minnesota State Sanatorium is proving very effective.

Collapse Therapy a Preventive Measure

Recent advances in collapse therapy are doing great good for individual patients, but a greater good by closing off lesions which otherwise would be sources of exposure to vast numbers of people. The discovery of the fact that many patients may remain ambulatory while artificial pneumothorax is being induced, or soon afterward, promises to do much to relieve congestion in rooms, wards, and hospitals for tuberculosis patients, to relieve the patient of economic strain, to relieve the taxpayer of a considerable burden and to prevent the spread of tuberculosis. The chief problem is one of finding cases suitable for such treatment, that is, before the disease has become extensive and there is much breaking down of tissues. Past experience has taught us that unless such case-finding methods are used in order to detect the disease in the earliest possible state, many are too advanced to respond well to any form of treatment. Therefore, we must not wait for patients to come to us with complaints, but must go out and find them months and even years before they would develop symptoms.

A summation of the facts of tuberculosis now at hand points to prevention of the initial and all subsequent infections as the goal for which we must strive. This means that pressure must be brought to bear on all the modes of attack on tuberculosis now in existence, so that each will function at the highest possible efficiency. The principal methods are all based on case-finding, so that the source of exposure may be stopped.

Recent Developments in Our Knowledge of Tuberculosis, J. Arthur Myers, Am. Rev. of Tuberc., Feb. 1933.

LETTER FROM A KANSAS DOCTOR'S SON TO HIS DAD

Dear Dad:

Your opinion that the present system of medical or premedical education is incorrect is undoubtedly a good opinion, but one which is nevertheless open to debate. As the system of premedical education now stands I am inclined to agree that it is wasted. However, rather than recommend its omission I think radical revision more nearly meets the indications. If those years spent in the mastery of the frog's circulation, the law of mass action and the action of the lever were applied to the understanding of the art and music which you so heartily recommend they would be more profitable. Under such a regime I believe the physician would more nearly measure up to the public expectations. Of course the problem resolves itself into the question of what the doctor is expected to be. Personally, I believe that the present need is not for more scientific learning but for more classical education, for while there is rarely an occasion permitting one to display his understanding of the frog's circulation there unfortunately occur instances where a knowledge of the ancient languages is desirable if not actually imperative. Let me demonstrate: The other evening I went out to dine with some friends of recent acquaintance. Being proud of their English heritage they initiated the evening with a display of the family album, much to my displeasure. However, trying to appear interested I inquired as to the meaning of the letters "AMPC" decorating the picture of a former Earl of something. My first inquiry was ignored and at my persistence my friend, who had had the advantage of a classical education drew me aside and advised that the letters meant "Ad mortem per cervicis," or something like it. Anyway after ten minutes I finally figured out that the man was just plain hanged. Well such fine points as those make the distinction between the "Doctor" and the "Doc." I never knew the difference until I looked the latter up in a large dictionary.

Knowing that mother reads De Kruif and is always interested in knowing the big shots whom I chance to meet I'll mention that I saw and heard Hans Zinsser the other night. Unfortunately I've forgotten what he wore and his wife wasn't there so I don't know what she wore, but by making a cinematographic reference I can say that he looked somewhat like the Barrymore who plays the villain roles, talked in a pleasant voice which was liberally punctuated by frequent clearings of the throat and brought his exposition to a climax by citing experiments in which he transmitted typhus fever by the rectal inoculation of lice. No wonder the rest of the profession can't keep up with the bacteriologists.

My work in the obstetrical division had been most enjoyable, moreso because it doesn't amplify my neurotic tendencies. That is one phase of the profession which I hope to learn by other means than the experimental route. However, the other night I had a dream in which I visualized myself in the lithotomy position with placenta previa, a contracted pelvis and twins in tandem breech presentation. You should have a long name for that psychological reaction.

Being from Kansas my advent into the urological department was the signal for all the profs and my cohorts to give me a grand razz. Around here, Kansas is conceived as being the land of sun, sunflowers and hypertrophied prostates. However, my stay in this division has been most instructive. Until one has had some familiarity with such a place he is unable to understand why French is the chosen language of the socially elite. Perhaps it is here that a good number of them acquire their linguistic propensities. Now if my college career had been spent in the mastery of French rather in the exploration of the Kaw I would now be better situated. As it is at present when I ask for a "bougie" I am just as apt to receive a "brassiere." Not only is the nomenclature confusing but the calibration of the instruments is unsatisfactory. I think they should be calibrated like guns. When I ask for a No. 30 French sound I have no idea whether

it will be the size of a 22, 45 or a 12 gauge.

In one of those books I found the reprint of an article you had written on fractures in 1912. I was surprised and pleased by your evident understanding of those disorders, but more so by your ingenious modification of the Brown splint. I think this work of yours was the forerunner of cubistic art. At any rate you succeeded admirably in converting the splint into an amalgamation of flying jibs, guy-wires and over-head valves. It not only immobilized the part but the patient and half his family as well. In fact it almost immobilized me—and I think it would you too if you had the courage to re-read that article. But what was worse than the design was your brazen assertion and display of intestinal investiture as denoted by your description that you had constructed the whole of the apparatus from work shop left overs and hay wire in the course of one hour. It must have taken the first two years of your post graduate era to have had such a nightmare, much less its execution.

And you still say the younger generation is all froth.

Love,

YOUR SON.

—————R—————

LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

I am glad to know you are having no trouble in getting your checks cashed again and imagine your landlady is also pleased. It probably was a good experience for you although rather inconvenient. Heretofore these pieces of paper that pay to the bearer, which have passed jauntily through your hands, have not impressed you very seriously. Now the stress seems to be relieved and the lesson will soon be forgotten.

Present indications seem to indicate that our president has a mind of his own, and while he may make some mistakes,

the people are willing to overlook any shortcomings. The man who has the intestinal fortitude to try to do something is always assured of support. It was refreshing to see the graceful manner in which our banks fell in line when the moratorium was declared. Some made a virtuous protest at closing declaring that they were in such splendid financial condition such a step was not necessary in their particular case. Nevertheless, they felt much more secure when Uncle Sam took charge of the situation. The individual with government bonds in his possession rated considerably higher than the one with an equal amount of bank or building and loan stock. People seemed to have a great deal of confidence in the old U. S. After you get through trying to get a loan on your insurance policy or your building and loan stock and after a chilly reception, you may drag a few government bonds out of your strong box and be assured that your credit may be again re-established. There is possibly a moral attached to this that you may be able to apply to your future savings. Up-to-date this savings problem has probably not caused you serious consideration. Although I can readily see after looking over my checks to you during the past six years how you might have a very tidy sum stored away somewhere, but to be on the safe side I am not going to depend on your savings for future emergencies. The banking situation was firmly and well handled.

The radical revision of veterans allowances is now in order, and I have not heard a dissenting voice from the program as advocated. Just why a doctor who spent two weeks at Camp Funston and is able to look after a general practice should draw a total disability pension from the government is hard for people to understand, and we have a number who are doing this in Kansas. Other professions are likewise represented in this class of undesirables, and it is to be hoped that our pension authorities will weed out those who are physically and financially able to carry on without government assistance.

I note the expenditure that you made for books and naturally am pleased to know your leanings along this line. I will suggest, however, that it might not be necessary to lean quite so strong at present. Textbooks are necessary of course, but you will soon learn that medical books over a year old have about the same value as a buggy whip or a used ox yoke. The author of a best seller in medical books plans to get out a new edition every time he or his wife has a birthday. The new edition may have only one revised chapter on the care of the cinder beetle during adolescence, but if you think your old edition still valuable try selling it. I have seen the pitiful advertisements of doctor's widows attempting to dispose of the old doctor's libraries. The final disposition of these collections is usually a gift to a medical student who hates to offend by frankly stating that he has no use for them. So I would ask you to select your books with caution and don't give too attentive ear to the broken down old physician who essays the role of salesman for medical books. I was an easy victim for many years, and the appealing terms of one dollar per month for only sixty months sold me many volumes of Scott, Bret Harte, and histories of the world galore. Collier's would long since have gone into receivers' hands had it not been for my loyal support. One of my rare bargains was a complete history of the world's war in six volumes published about two months after hostilities started. Your mother whose recognition of good literature is keener than my own after filling the attic with treasures I had purchased openly rebelled, and after this I had to hide my purchases in the office down town. If at any time you need encyclopedias, histories of Rome and complete works of Victor Hugo, etc., I can furnish you with these express charges prepaid, or if you have a friend who would like to borrow some books I would consider it a favor to be put in touch with him. While I am in a confessional mood, I might say the young lady who worked her way through college by taking magazine subscriptions

was always a stumbling block to my economy program. Sometimes I wondered why a mere chit of a girl only thirty-five years old should want to finish her college work and would steel myself for a defensive line of talk but not for long. After listening to the pitiful history of the girl I nearly always broke down and subscribed for two or three magazines I didn't want. Fortunately on several occasions I never received a copy of the magazine or a report of the grades the young lady made at college.

I am relieved that you and your brother have finished your fraternity initiatory ceremonies and have to take no more chances along this line. I note where one candidate for fraternity honors down in Oklahoma had both hands blown off in one of their side splitting stunts. Of course it was no one's fault as the young man was popular and had no enemies. Ho hum! boys will be boys! I have only visited fraternity houses a few times and as it happens, it has always been during recreation hours. Any way there was a snappy game or two of black jack, poker, or bridge running fairly steadily. I have seen a number of students carrying books into these houses and they always looked like nice new books that hadn't been abused by hard usage. The boys are fine manly appearing fellows, and I have always felt sorry that they were handicapped by not having a square deal in trying to get an education. I know you will say that this is another of dad's old foggy ideas. Maybe the old saying "the things we are not up on we are down on" sizes up the situation.

Love,

DAD.

P. S. Your mother whom you know is a loyal Democrat and an ardent prohibitionist is torn by many conflicting emotions at present. She receives my sympathetic suggestions with ill concealed suspicion.

————— R —————

Professor: "I would like a preparation of phenylisothiocyanate."

Drug Clerk: "Do you mean mustard oil?"

Professor: "Yes, I can never think of that name."

75TH ANNUAL MEETING KANSAS MEDICAL SOCIETY

Lawrence, May 2, 3 and 4, 1933

Headquarters—Union Memorial Building, University of Kansas. All general sessions will be held on the second floor of the Union Memorial Building, University of Kansas.

PROGRAM

“The Financial Angle of the Medical Profession”—Dr. J. D. Colt, Sr., President, Manhattan.

“Report of Necrology Committee”—Dr. J. T. Axtell, Chairman, Newton.

“Tularemia, Summary of Cases Reported in Kansas”—Dr. Earle G. Brown, Topeka.

*Dr. Phillip W. Morgan, Emporia.

“Infectious Mononucleosis”—Dr. R. I. Canuteson, Lawrence.

*Dr. B. M. Lins, Lawrence.

“Cardiac Neuroses”—Dr. James G. Stewart, Topeka.

*Dr. Wm. C. Menninger, Topeka.

“Some Experimental Work With Rabies”—Dr. Guy E. Finkle, Canton.

*Dr. N. P. Sherwood, Lawrence.

“Head Injuries”—Dr. A. R. Hatcher, Wellington.

“The Health Officer and the General Practitioner”—Dr. W. H. Young, Fredonia.

*Dr. E. C. Duncan, Fredonia.

“An Evaluation of the Normal”—Dr. C. F. Nelson, School of Medicine, University of Kansas, Lawrence.

*Dr. Ralph H. Major, Mission Hills.

“Essential Considerations in Caesarean Section”—Dr. L. V. Dawson, Ottawa.

*Dr. H. L. Chambers, Lawrence.

“Is Chronic Appendicitis a Myth?”—Dr. L. L. Woodfin, Osawatimie.

*Dr. W. M. Mills, Topeka.

“Relationship of General Practice to Infantile Paralysis”—Dr. C. T. Hinshaw, Wichita.

*Dr. E. D. Ebright, Wichita.

“Sterility in Women”—Dr. J. D. Clark, Wichita.

“Overweight, Its Causes and Treatment”—Dr. Edward H. Hashinger, School of Medicine, University of Kansas, Rosedale.

*Dr. J. D. Colt, Jr., Manhattan.

“Differential Diagnosis and Treatment of Intracranial Lesions”—Dr. Frank R. Teachenor, School of Medicine, University of Kansas, Rosedale.

*Dr. W. E. Mowery, Salina.

“Trichomonas Vaginalis Vaginitis”—Dr. Harold V. Holter, Kansas City.

*Dr. Thomas J. Sims, Kansas City.

Symposium on Cancer:

“The Cancer Problem”—Dr. C. C. Nesselrode, Kansas City.

“Carcinoma of the Large Bowel”—Dr. H. L. Snyder, Winfield.

“Carcinoma of the Breast”—Dr. Alfred O'Donnell, Ellsworth.

*Dr. M. B. Miller, Topeka.

GUESTS

“Certain Practical Aspects of Nutrition in Childhood”—Dr. Philip C. Jeans, Professor of Pediatrics, State University of Iowa, College of Medicine, Iowa City, Iowa.

“Finding Tuberculosis in Apparently Healthy Youth”—Dr. Arthur A. Pleyte, Wisconsin Anti-Tuberculosis Association, Milwaukee, Wisconsin. The above address will be given at the public meeting in the Auditorium.

“The Problem of Chronic Arthritis”—Dr. Russell L. Haden, Cleveland Clinic, Cleveland, Ohio.

“Higher Education and the Medical Profession”—Dr. E. H. Lindley, Chancellor, University of Kansas, Lawrence, Kansas.

“Tumors of the Sympathetic Nervous System”—Dr. Dean Lewis, President-elect American Medical Association and Surgeon in Chief of the Johns Hopkins Hospital, Baltimore, Maryland.

“The Physiology and Conduct of Normal Labor”—Dr. Edward L. Cornell, As-

sistant Professor of Obstetrics, Northwestern University Medical School, Chicago, Illinois, with moving pictures.

HOST

The Douglas County Medical Society has an active society with a membership of thirty-three. All of its committees, with the co-operation of its Woman's Auxiliary, will be wide-awake during the meeting to assure the comfort and entertainment of visitors throughout the session.

The first officers of the Kansas Medical Society were elected in Lawrence on February 10, 1859, when the state was yet a territory.

Officers

Dr. A. J. Anderson.....President
 Dr. R. H. Hutchinson.Vice-president
 Dr. Lyle S. Powell.....Secretary
 Dr. E. M. Owen.....Treasurer
 Drs. H. T. Jones, J. B. Henry,
 G. M. ListonCensors

LOCAL COMMITTEES

General Committee

Doctors H. L. Chambers, N. P. Sherwood and H. T. Jones.

Housing and Date

Doctors P. H. Woodard and F. R. Isaacs.

Commercial Exhibits

Doctors J. R. Bechtel and H. L. Chambers.

Scientific Exhibits

Dr. R. I. Canuteson.

Public Meeting

Doctors O. O. Stoland and C. F. Nelson.

Ladies Entertainment

Doctors J. B. Henry, L. S. Powell and E. P. Sisson.

Publicity

Dr. W. O. Nelson and Messrs. Geo. Hetrick, Fred Ellsworth and W. A. Dill.

Banquet

Doctors J. M. Mott and A. L. Seal.

Badges and Buttons

Doctors L. K. Zimmer and R. H. Edmiston.

Programs—Printing

Dr. W. O. Nelson, Messrs. Geo. Hetrick, Fred Ellsworth and W. A. Dill.

Entertainment at Banquet

Doctors J. M. Mott and A. L. Seal.

Hotel and Rooms

Dr. R. H. Edmiston.

Transportation

Doctors V. M. Auchard and H. E. Van Noy.

Golf Tournament

Doctors A. S. Anderson and H. P. Jones.

MEETINGS OF HOUSE OF DELEGATES

Tuesday, May 2, 1933

The House of Delegates will meet in the Ball Room, second floor of the Union Memorial Building at 7:30 p.m. The following order of business will be observed:

Reading of the minutes of last meeting.

Report of Secretary, Treasurer, Councilors, Chairman of Defense Board.

Report of standing committees.

Unfinished business.

New business.

Thursday, May 4, 1933

The meeting of the House of Delegates will be held in the cafeteria, private room, Union Memorial Building at 8:00 a.m. Order of business:

Roll call.

Election of Officers:

President-elect

Vice-president

Treasurer

One delegate to A.M.A.

Councilors for the first, second, seventh, and eighth districts.

Unfinished business.

New business.

MEETINGS OF THE COUNCIL

The Council of the Kansas Medical Society will meet in joint session with the secretaries of county societies on Tuesday, May 2 at 12:15 p.m. in the cafeteria, private dining room, Union Memorial Building. Other meetings of the Council will be held at the call of the president.

The new Council will meet in the same room on the last day of the meeting immediately following the meeting of the House of Delegates.

MEETING OF SECRETARIES

The secretaries of the county societies will be given a complimentary luncheon on Tuesday, May 2 at 12:15 p.m. in the cafeteria, private dining room of the Union Memorial Building. It will be a joint meeting with the Council of the Kansas Medical Society. Secretaries will please make luncheon reservations when registering.

GOLF

The Kansas Medical Golfing Association will hold an all-day tournament on Monday, May 1. All members who play golf are invited to join the association. Entry reservations should be made through the local committee, Doctors A. S. Anderson and H. P. Jones.

BANQUET

The annual banquet will be held in the cafeteria of the Union Memorial Building, Wednesday, May 3 at 6 o'clock sharp for the members of the Kansas Medical Society, their wives, and friends, immediately followed by dancing in the Ball Room on the second floor, Union Memorial Building. Please make reservations when registering. Tickets \$1.00.

PUBLIC MEETING

A public meeting will be held on Wednesday, May 3rd at 10:00 a.m. in the Auditorium, University of Kansas, opposite the Administration Building. Dr. A. A. Pleyte of the Wisconsin Anti-Tuberculosis Association of Milwaukee will address the meeting. His subject will be "Finding Tuberculosis in Apparently Healthy Youth."

Dr. Pleyte is an authority on his subject. The public meeting will be in conjunction with the university students weekly convocation. The general session will be dismissed and all members are expected to attend this meeting.

KANSAS MEDICAL AUXILIARY

Eighth Annual Meeting

Officers

Mrs. E. C. Duncan, Fredonia..President
 Mrs. E. J. Nodurft, Wichita.....
 President-elect
 Mrs. Geo. H. Hobson, Kansas City....
 Vice-President
 Mrs. M. O. Nyberg, Wichita...Secretary
 Mrs. W. G. Emery, Hiawatha..Treasurer

Standing Committees

Mrs. C. B. Van Horn, Topeka.....
 Organization
 Mrs. L. B. Gloyne, Kansas City.....
 Health-Education
 Mrs. D. W. Basham, Wichita.....
 Public Relations
 Mrs. Alfred O'Donnell, Ellsworth....
 Hygeia
 Mrs. J. T. Hunter, Topeka.....
 Press and Publicity
 Mrs. J. B. Carter, Wilson....Legislative
 Headquarters—Main floor of Union
 Memorial Building, University of Kan-
 sas.

PROGRAM

Tuesday, May 2, 1933

Registration—Main floor of Union Memorial Building.

3:00 p.m.—Drive, starting at Eldridge Hotel.

4:00 p.m.—Reception at home of Mrs. A. J. Anderson, 717 Vermont Street.

7:00 and 9:00 p.m.—Patee Theater, complimentary to the visiting ladies.

Wednesday, May 3, 1933

10:00 a.m.—Convocation, Auditorium of University of Kansas.

11:00 a.m.—Business meeting, Grill Room, Eldridge Hotel. All hostesses and visiting ladies are cordially invited to attend.

1:00 p.m.—Luncheon, Grill Room, Eldridge Hotel. Tickets 50c.

2:30 p.m.—Visit to Spooner-Thayer Museum.

3:30 to 4:30 p.m.—Inspection and tea at Watkins Memorial Hospital. Courtesy of Dr. Canuteson and staff.

6:00 p.m.—Banquet at Union Memorial Building immediately followed by dancing.

THE PHYSICIAN'S LIBRARY

RADIOLOGIC MAXIMS, by Harold Swanberg, B. Sc., M.D., F.A.C.P., Editor of The Radiological Review, Quincy, Illinois. With a foreword by Henry Schmitz, A.M., M.D., L.L.D., F.A.C.S., Professor of Gynecology and Head of the Department, Loyola University School of Medicine. Cloth. Price, \$1.50, 126 pages. Quincy, Illinois: Radiological Review Publishing Company, 1932.

This little one hundred and twenty-five page book of short, to-the-point paragraphs, covers the entire field of radiology, diagnostic and therapeutic. Because of the ever increasing place that radiology occupies in medicine the information is up to date and pertinent. It is written for the general practitioner, and for members of other specialties who may not be fully aware of the tremendous advances that have been made, both as to radiological diagnosis and treatment of malignant conditions. Nor is all the available benefit from treatment limited to malignancy. Many skin conditions, non-malignant growths, and certain non-malignant conditions of the female pelvis, are amenable to *x-ray* treatment. For the physician who has little time for reading in the specialties, this book should prove a very valuable source of information on *x-ray* and radium.—A.K.O.

CLINICAL DIAGNOSIS. Physical and Differential. Neuton S. Stern, A.B., M.D. (Harvard). Associate Professor of Medicine, University of Tennessee School of Medicine, Memphis. The Macmillan Company, New York. Price, \$3.50.

The author, a student of Cabot, has incorporated his own lectures and successful teaching methods of eleven years in a book of 364 pages. This convenient size appears possible by virtue of his clear thinking and his concise, almost choppy statements in plain English. He avoids stereotyped, pedantic, latin terminology except for brevity. The aim is definitely directed toward the answer to the physician confronted with the problem "what is the diagnosis?" The medical student will find diagnostic methods listed and well described. Each symptom or sign in the illustrative case histories is annotated by clinical comments as to its importance or triviality. To quote one: "the face is somewhat flushed

and red" (not incompatible with cerebral hemorrhage. Against simple fainting. Redness against a cardiac accident). The practitioner should be most gratified to find an excellent classification of heart diseases according to the four definite criteria: I. Cause. II. Anatomy. III. Physiology. IV. Function. Diagrams of electrocardiographs are plain, bold and all conveniently placed on one page. The author attempts to keep good perspective rather than make the book an encyclopedia, but a few of the finer details might still be included. The alphabetical section on differential diagnosis is especially useful for its outlines of body types, coma, convulsions, constipation, dullness, pain, heart murmurs, splenic, liver and lymph node enlargement. There is an adequate index of 25 pages.—H.M.B.

PRACTICAL MEDICINE SERIES, 1932—THE EYE, E. V. L. Brown, M.D., Professor of Ophthalmology, University of Chicago; Attending Ophthalmologist, St. Luke's Hospital, Chicago and Louis Bothman, M.D., Associate Professor of Ophthalmology, University of Chicago. **THE EAR, NOSE AND THROAT**, George E. Shambaugh, M.D., Professor of Otology, Rhinology and Laryngology, Rush Medical College of the University of Chicago; Otolaryngologist of the Presbyterian Hospital and Elmer W. Hagens, M.D., Instructor in Otology, Rhinology and Laryngology, and Friedberg Fellow in Otolaryngology, Rush Medical College of the University of Chicago. The Year Book Publishers, Inc., Chicago. 651 pages. Price, \$2.50.

The authors of this book have done excellent work in briefing all the current literature of the subject for 1932. Their comments and criticisms of the various articles are particularly valuable.

This volume will be of especial interest to the reader in two ways, first, each resume is complete and compact, and in addition, each subject is fully indexed so the original article can easily be found.

This book is indispensable for the progressive and up to date eye, ear, nose and throat specialist.—H.W.P.

DISEASES OF THE CORONARY ARTERIES (Myocarditis): Don C. Sutton, M.S., M.D., Associate Professor of Medicine, Northwestern University; Attending Physician Cook County Hospital; Chief, Cardiac Follow-Up Clinic, Cook County Hospital, Chicago and Harold Lueth, Ph.D., M.D., formerly Instructor of Physiology, Northwestern University, Chicago. Illustrated. The C. V. Mosby Company, St. Louis. Price, \$5.00.

This seems rather a timely subject to present as angina appears to be on the

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

THE ANNUAL MEETING

The Seventy-Fifth annual meeting of the Kansas Medical Society will be held in Lawrence, Tuesday, Wednesday and Thursday, May 2, 3 and 4. General sessions will be held on the second floor of the Union Memorial Building, of the University of Kansas.

An unusually interesting program has been arranged. Without exception, the topics listed for discussion will be of interest to every practitioner of medicine. Of especial value is the symposium which has been arranged by the Committee on Cancer.

The second day of the session again will feature discussions by invited guests. The society is indeed fortunate in securing such outstanding speakers as Dean Lewis, President-elect of the American Medical Association; Philip C.

Jeans of the University of Iowa; Arthur A. Pleyte of the Wisconsin Anti-Tuberculosis Association; Russell L. Haden of the Cleveland Clinic; Chancellor E. H. Lindley of the University of Kansas; and Edward L. Cornell of Northwestern University Medical School.

Meetings of the House of Delegates are scheduled for Tuesday night and Thursday morning. The annual banquet for members and their wives will be held Wednesday night.

Dr. Arthur A. Pleyte will address the students of the university at their weekly convocation on Wednesday morning. The general session of the society will be dismissed in order that the members may hear Dr. Pleyte.

Every member should make an unusual effort to attend this meeting, which in reality is a post graduate course. The completed program appears in this issue of the JOURNAL.

CERTIFICATION OF SPECIALISTS

Today, a physician may graduate from medical school and the next day open his office as a "specialist." On the other hand, a physician in general practice for many years may change his location and likewise announce himself as a "specialist." It is possible that neither one has had any special training in that branch of medicine in which he has announced his specialty. Any physician who passes the state board is a potential "specialist" and no law prohibits him from practicing as such.

Germany, some years ago inaugurated a campaign looking forward to the time that no physician could announce himself as a "specialist" until he had actually demonstrated he possessed special ability in his chosen field. The profession proposed and adopted regulations whereby "specialists" might be definitely recognized. These regulations have

been revised and amplified from time to time. According to present regulations governing the admission of panel physicians to practice in the *krankenassen*, no specialist will be recognized who has not been approved by a competent medical organization. It is now considered after the regulations have been in operation for several years that they have proven their value and have clarified to a great extent a previously bad situation.¹

Some years ago, a board was organized by the five national societies pertaining to otology and laryngology, providing ten men to examine applicants who wished to be certified as specialists. The American Board of Otolaryngology in its seven years of organization has examined about two thousand applicants and issued that many certificates of proficiency, these comprising about one-half of the men practicing this specialty.² Legislation governing specialists has been proposed in several states.

A number of plans for certification of specialists have been suggested. The Waters plan³ has been adopted by the Medical Society of the State of New Jersey, which proposes that specialists be regulated by the society through a method of accrediting.

The plan proposed requires no new or additional legislation; in fact, avoidance of legislative action and keeping the control of medical affairs in the hands of the organized profession are among the merits of this proposal. Neither does the plan interfere, in any way, with the *legal rights* of any regularly licensed physician, surgeon, specialist, or general practitioner. It will, however, permit those members who are, or may become properly qualified in certain branches of medical practice to secure the approval

and endorsement of the society, and to let the facts be made known to the public through proper medical channels.

A Committee on Credentials of Specialists is provided in the state society and the component county societies. Application is made on blanks furnished by the state society. The application is made to the county society committee which make such further investigation as is necessary and when approved forwards to the state committee. The state committee determines whether the candidate is worthy of recognition as a specialist and forwards its recommendation to the secretary of the state society at least 30 days prior to the annual meeting. In the event the application is rejected, the right of appeal is provided for.

QUALIFICATIONS

(1) A candidate must be known to and recognized by his professional associates as an honest, conscientious and ethical physician.

(2) Fellowship in the American College of Surgeons, or Fellowship in the American Colleges of Physicians; or a diploma from one of the National Examining Boards—ophthalmology, otolaryngology, obstetrics and gynecology; membership in the American College of Radiology, or the Radiologic Society of North America; or membership in the American Psychiatric Society will be considered a favorable recommendation.

(3) Members of the Medical Society of New Jersey holding appointments on a hospital service, in a special branch of medicine or surgery or any of the recognized specialties, whose service is sufficiently active to afford attainment of a high degree of proficiency; and the duration of whose appointment has been at least 5 years; will be deemed worthy of consideration.

(4) Those who may later receive, from recognized colleges or other teaching in-

1. Berlin Letter, Jour. A.M.A., Sept. 17, 1932.

2. Northwest Med. Jan. 1933.

3. Jour. M.S. New Jersey, March 1932.

stitutions, certificates showing completion of post-graduate courses of instruction leading to the degree of "Master" in any branch of medicine or surgery.

(5) Evidence of continuous, active, successive practice during at least 10 years, marked by study, travel, active membership in medical societies, and proof of special ability in their chosen fields of practice.

CERTIFICATION

(1) The certification as specialist in any given branch of medicine or surgery shall be awarded at the Annual Meeting of the State Medical Society, in such manner as may hereafter be determined by the State Society Committee on Credentials and the Board of Trustees.

(2) A suitably engrossed *Certificate*, carrying the seal of the State Medical Society, and subscribed to by the State Society Committee on Credentials, shall be issued to all approved applicants.

(3) The State Society, upon the advice and request of the State Society Committee on Credentials, may distribute the lists of *Approved Applicants* and *Certified Specialists* in such places and manner as may seem desirable for the effectiveness of this plan.

(4) To defray the cost of certification and certificate, a charge of \$25 shall be made, payable before the certificate of qualification as a specialist is issued.

Undoubtedly, some method of control should be inaugurated in Kansas. Benefit would result to both the public and the profession. The practitioner who was not certified could still care for those illnesses which he considered himself qualified to treat. Certification would enable a layman to make a more intelligent choice of the practitioner he desired to consult.

Some objections may be raised to the plan. On the other hand, there are suf-

ficient reasons for certification of specialists, and the profession is best qualified to certify their own members.

LEGISLATION

Many bills of interest to the medical profession were introduced in the 1933 session of the legislature. Few of them became laws.

The outstanding piece of legislation in regard to medical practice was the enactment of H. 431, which became a law when it was published in the official state paper on March 15. This law requires every doctor of medicine who is licensed, shall annually renew his certificate by registration with the secretary of the Board of Medical Registration and Examination and the payment of a fee of one dollar, on or before October 1, but not earlier than July 1. In the event the fee is not paid by October 1, the secretary is required to strike the name of the holder from the register, but the certificate may be restored by payment of a fee of five dollars, if satisfactory proof is submitted at the time of the physician's moral fitness. This law also removes the provision that no school of practice is to have a majority on the board as representation is "to be given to the different schools of practice as nearly as possible in proportion to their numerical strength in this state."

The enactment of S. 340 authorizes the governing body of any city operating under the commission form of government having a population of more than 120,000 and an assessed valuation of less than \$150,000,000 to license for purposes of regulation or revenue all trades, occupations or professions.

No less than five bills were introduced relating to crippled children. One of these, S. 52, became a law. Limits treatment to actual orthopedic deformities; provides for a levy of one-tenth of a

mill, and any unexpended monies shall remain in the fund and the levy for the next year be proportionately reduced. S. 181 which carried the endorsement of the legislative committee of the state society, and many of the component county societies passed the senate, was recommended by the House committee for passage, but with many other bills was not given consideration in the latter days of the session.

The Committee on Public Health recommended S. 458 be not passed. This bill provided no patient should be admitted to any dispensary of the University of Kansas School of Medicine unless he was certified by a qualified doctor of medicine as being unable to pay for medical services. Provision was also made that no charge was to be made any resident of the State of Kansas for any service in the dispensary including investigative and therapeutic.

The law fixing salaries of county officers provides coroners in counties of less than 70,000 population shall not receive a salary, but three dollars per diem when holding inquests and five cents per mile. In counties of 70,000-90,000 population the salary is \$1,080 per year, and in counties of more than 90,000, the annual salary is \$1,500.

The bill (H. 728) requiring licensed practitioners of certain professions affecting the public health to use their professional degree after the name, if the term "Doctor" was used, passed the House. It was recommended by the committee in the Senate for passage, but remained on the calendar at the close of the session. The enactment of this bill would have been of especial value to the public.

H. 319, authorizing counties of more than 110,000 to construct, maintain and operate a county hospital for care and

treatment of indigent sick as reported in the March JOURNAL was amended in the House to provide for the treatment of such indigent by any "practitioner." While the bill passed the House, the Senate committee made an unfavorable report.

H. 740 provided for the admission of any practitioner of the healing art licensed to practice in the state, to any tax exempt hospital. It was not given consideration after being placed on General Orders. It is reported more than 500 telegrams from members of the medical profession, superintendents of hospitals and others, were received by House members, protesting against passage of the proposed bill.

EXAMINE AND PROTECT EVERY CONTACT

Each year the National Tuberculosis Association and its many affiliated associations throughout the country strive to focus public attention on a single pertinent fact about tuberculosis. During 1932, for example, an educational campaign was carried on to remind people that tuberculosis comes only from tuberculosis or, in the words of the slogan, that "Every Case Comes from Another." The success of that effort warrants its continuation or repetition in somewhat modified form. Consequently during 1933 the slogan of the Early Diagnosis Campaign will be "Examine and Protect Every Contact."

Beginning April 1, the publicity and educational message of tuberculosis associations will urge that whenever a case of tuberculosis is discovered, every contact should be examined. Emphasis will be laid on the danger of the disease to children and the necessity of examining them with the tuberculin test and the x-ray. Because of the economic stress it is all the more necessary to build our

defenses against the enemy, who strikes when resistance is low.

The decrease in the tuberculosis mortality especially during the past twenty-five years has been one of the outstanding accomplishments of preventive and curative medicine. Tuberculosis has dropped from first to the seventh principal cause of death; yet it is still the leading cause of mortality among men during the productive period of life, from twenty to forty.

Further progress in the tuberculosis prevention program requires the close co-operation of the private practitioner, the public health worker, the patient and the family, and the discovery and proper disposition of the cases of tuberculous infection and childhood tuberculosis. The program based on the newer knowledge of tuberculosis calls for an aggressive attitude on the part of the physician and a deep realization that no case of tuberculosis is adequately disposed of until the source of infection is determined and all contacts have been examined to determine whether or not they, too, harbor any tubercle bacilli, and when discovered to be infected, the contacts must be dealt with, so as to safeguard them against subsequent breakdown with the disease.

EDITORIAL COMMENT

The annual meeting of the American Association for the Study of Goiter will be held in Memphis, Tenn., May 15-17, 1933.

Announcement has been made a research fund of \$1,500 has been received by the University of Nebraska from the Merrill Company of Cincinnati for work on allergy. The work will be carried on under the supervision of the departments of internal medicine and bacteriology of the University.

Creighton University Medical School, Omaha, announces a three-day cancer

clinic conference at the Creighton Memorial St. Joseph's Hospital on April 19-21. The conference will be conducted by Doctors Joseph Colt Bloodgood and Charles F. Geshickter of the surgical pathological laboratory of Johns Hopkins Medical School. An invitation is extended to all practitioners of medicine and dentistry interested in cancer. No fee is attached.

Recent appointments by Governor Landon. Board of Medical Registration and Examination: E. C. Morgan, Clay Center, vice E. C. Duncan, Fredonia; C. H. Ewing, Larned, reappointed. Kansas State Board of Health: H. A. Browne, Galena, vice H. H. Brookhart, Columbus; H. L. Aldrich, Caney, and Richard S. Haury, Newton, vice C. M. Jenney, Salina, and B. Anderson, Victoria. James M. Scott, Lebanon, was appointed as a member of the Board of Administration.

The Mucin Committee of Northwestern University Medical School has complete reports on more than 600 ulcer patients treated with gastric mucin. The reports entirely confirm the earlier findings of Doctors Arthur Fogelson, Arthur Atkinson and Clarence Brown of the medical school faculty. Arrangements have been made with several manufacturers for the marketing of gastric mucin under patents owned by Northwestern University. The income from royalties will be devoted entirely to research in gastrointestinal diseases.

Autopsy reports of three patients with jamaica ginger paralysis dying of other causes are made by Goodale and Humphreys of Worcester, Mass. A study of the nerves shows an acute inflammation of one segment of the cauda equina in one case, and myelin sheath and axis cylinder degeneration of the radial, sciatic external popliteal, anterior tibial and posterior tibial nerves in all three cases. The degeneration was found as high as the gluteal fold in the sciatic nerve but not in the anterior roots of the lumbar cord. (*Jour. A.M.A.*, Jan. 3, 1931.)

THE PRESIDENT'S MESSAGE

To the Members of the Kansas Medical Society:

Before another issue of the Journal the Seventy-Fifth Annual Meeting of the Kansas Medical Society will be history. This meeting will be an extremely interesting one, looking at it from many angles.

First—the meeting will be at a time when the general practice will be most quiet. The first part of May is a time when the people are usually all well.

Second—the meeting place will be Lawrence, the home of the state university which holds the distinction of having more medical graduates located in Kansas than the combination of any five medical schools in the United States. The hotel accommodations are fine.

Third—the legislative committee has been able to get practically all the laws passed that were asked for—you will want to know what they are and all about them. Do not miss hearing all there is to know of these new laws.

Fourth—there is a possibility of you meeting fifteen hundred of your colleagues and their wives if you will only insist on the other doctor in your town to lock up his office and accompany you—do this, start talking it up to-day.

Fifth—last, but the best of all the program. The secretary tells me it is an outstanding one, probably the best for many years. The guests are all very distinguished men in their branch of the profession; the subjects selected by our guests and local men are all interesting ones.

The entertainment aside from the medical angle promises to be very good. You will miss a treat if you are not there.

I will see you in Lawrence, May second, third and fourth.

Respectfully submitted,



Manhattan, Kansas

President, Kansas Medical Society

April 1, 1933

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

The Diagnosis of Gonorrhea

For the most part the diagnosis of gonorrhea is a simple process: the making of smears, staining one with methylene blue and if suspicious diplococci are present, then the making of a Gram's stain on the other slide and finding the typical Gram's negative diplococci within the pus cell. As a rule, little difficulty is encountered in the male patient for there are not the contaminating bacteria present, the discharge is evident and good smears are obtained.

However, in the female, both in adults and in children, there are many cases that make the diagnosis impossible from the direct smear.

The routine collection should be, in the adult, by the use of a speculum and collection of an ample amount of pus upon an applicator and then making several smears. By making several smears, the examiner has the privilege of making more of a detailed study. On the smears from the female with the numerous contaminating bacteria and flora, little information is obtained from methylene blue, so there is little need for wasting time with this stain. Stain several slides with Gram's stain. As a check to determine if the Gram's stain is working, it is wise to keep on hand a stock suspension of a known Gram's positive and a known Gram's negative bacteria and placing a drop of each upon opposite ends of the slide, upon which you are doing the Gram's stain. At once you rule out the error of a poor Gram's stain. It will be recalled that the ordinary gentian violet solutions keep a comparatively short time. Recently, articles have appeared recommending the use of glycerine with the gentian violet as a preservative.

With all of the care and study, there are numerous cases that present Gram's negative diplococci which are definitely not gonococci, both from the history and the clinical course of the case. It is these cases that deserve more study, deter-

mination of the culture characteristics and a ruling out of gonococci.

I have always made a practice of being rather reserve in giving a written statement as to the positive diagnosis of gonococcus infection. Regardless of this, the attending physician wants to know, positively, is this a gonorrhea or is it some other type of infection, mainly from the treatment and prognostic standpoint.

The most common confusing bacteria is the micrococcus catarrhalis. Although meningococcus stains as does the gonococcus, there is little danger of confusing the bacteria except in a rare eye case.

In questionable cases, we must resort to cultures and for the most part, gonococci are rather difficult to grow. Best growth is obtained upon either ascitic fluid agar or cystin-heart-ascitic-fluid-agar. If Gram's negative diplococci are obtained upon the media, then transfer to a tube of dextrose ascitic fluid agar. Gonococci will produce acid while the micrococcus catarrhalis produces no acid. If differentiation from meningococcus is desired, transfer to a maltose ascitic fluid agar; the gonococcus will produce no acid while the meningococcus produces acid.

In these questionable cases, there must be a close study made, a close cooperation of the physician and the laboratory worker. Numerous slides from the female must be reported as questionable or unsatisfactory due to the enormous number of other bacteria, to other Gram's negative cocci and often, due to improper collection or smearing of the pus upon the slide.

—R—

In their experimental study with theelin on five women, Werner and Collier, observed that theelin restores the breasts and genital tract of women to apparently the normal sexual state after previous castration atrophy. Theelin relieves the subjective symptoms that occur in women following castration. Four ovariectomized women to whom the authors gave large doses of theelin stated that "libido was markedly increased." (*Jour. A.M.A.*, March 4, 1933.)

RECENT MEDICAL LITERATURE

Edited by
WILLIAM C. MENNINGER, M.D., Topeka

PROBLEMS IN MANAGEMENT OF DISORDERS OF THE MENOPAUSE

The author deals particularly with the treatment of menopause changes with the various ovarian hormone preparations. He discusses three types of menopause changes: one, "simple" menopausal cases; two, the pseudo-thyrototoxic cases, those simulating other forms or organic disease, and three, the involutional mental cases. He thinks that in this second group a clinical trial of one of the ovarian preparations may determine the differential diagnosis, in that if it is effective the symptoms are due to the menopause and not due to thyroid disease.

He discusses comprehensively the various standardized hormone preparations as well as their dosage. He is inclined to prefer amniotin because it is distinct in rubber capped vials of 50 to 100 units, the average dose of which he says is about 20 units given once daily and that unless it is given daily it is not effective. He also mentions progynon, menformon, and theelol. He has found that the latter which are dispensed in capsules are effective if given orally and states that it is the most convenient form of follicular hormone therapy at present.

Sevringhaus, E. L.: Management of Disorders of the Menopause. *The Wisconsin Medical Journal*, Vol. 32:9-13, January, 1933.

RADIOGRAPHIC DIAGNOSIS OF EARLY PREGNANCY

The writer gives the radiographic picture of the embryo at various periods of gestation as well as giving the corrective measures for adverse factors, the radiographic equipment necessary, the radiographic technic, and what he calls constant factors. He thinks he has sufficient evidence to justify the belief that pregnancy can be radiologically diagnosed as early as the sixth week. In the discussion of his paper there is the suggestion that it is dubious whether one should attempt an absolute diagnosis unless some bony structure of the foetus is visible. Special attention is given not only to the diag-

nosis but also to the possibility of a legal complication. In this they are assuming that one might confuse the fibroid with a possible pregnancy. In all of his works Doctor Thomas has checked his pictures with the menstrual data and the date of delivery.

Radiographic Diagnosis of Early Pregnancy. Thomas, A. J. *Radiology* 19:99-104. August, 1932.

BLOOD PRESSURE IN MEN AND WOMEN

Following a statistical study of 5,540 individuals, the author concludes that the analysis shows an increase in mean value of systolic and diastolic blood pressure with age, the most marked rise occurring a decade earlier for women than for men. The absolute variation is greater for women than men. There is a statistical significant difference in mean value for men and women after 30 to 40 years of age. The clinical significance of blood pressure of equal degree must be considered independently in men and women. A given elevated blood pressure is more apt to be benign in nature and if of pathological consequence to run a longer course in women than in men. Hypertension as a cause of death is as frequent in men as in women even though the incidence of blood pressure at higher levels is significantly greater in women. In the older groups this difference is partially explained by the shorter course of the condition in men.

A Comparison of Blood Pressure in Men and Women: A Statistical Study of 5,540 Individuals, *Annals of Internal Medicine*, 6:754-770, December, 1932.

THE MALARIAL TREATMENT OF GENERAL PARESIS

The writer gives a very excellent presentation from many angles of a study of 200 cases of general paresis treated in the Horton Mental Hospital at Epsom, England, which he reviews from the standpoint of seven years' experience with them. Of this 200, 176 were treated with malaria only and 24 were treated with malaria and novarsan. The small group of 24 were relatively much more helped with 29 per cent of these actually showing good remissions and 45 per cent being improved. On the 176 treated with malaria only 16 per cent showed good remissions and an additional 33 per cent were improved.

In this same Journal there is an article

by another physician who reports the results they gained in malarial treatment of general paresis though in a smaller series of cases; the results run about the same, namely about 30 per cent to 40 per cent discharged as improved each year.

Nicol, W., A Review of Seven Years' Malarial Treatment in General Paralysis. *Journal of Mental Science*, Vol. 78:843-866. October, 1932.

SERUM REACTIONS

Criep presents first the types of reactions occurring following the introduction of the therapeutic sera; second, the diagnostic methods by which they may be anticipated, and, finally, the value of the various procedures employed for purposes of avoiding such reactions. The types of reaction which a patient develops may be one of three different types: (1) Ordinary serum sickness, (2) accelerated serum sickness, and, (3) primary or allergic (atopic) serum reaction. It has been found that a patient naturally or otherwise sensitive to horse serum can be treated with goat serum with impunity.

Serum Reactions: Their Classification, Diagnosis and Management, Criep, Leo H., *The Medical Bulletin of the Veterans' Administration*, 9:142-147, October, 1932.

—R—

THE PHYSICIAN'S LIBRARY

(Continued from Page 150)

increase. The presentation here is very concise; symptoms are clearly and definitely stated. A good chapter on pathology followed by the treatment which includes nicely the things not to do, as well as those to do.

It is very readable and many timely quotations drive the point home. It is a good book to have near at hand for reference.—M.G.S.

THE SPUTUM, Its Examination and Clinical Significance. Randall Clifford, M.D., Associate in Medicine, Peter Bent Brigham Hospital; Assistant in Medicine, Harvard Medical School; formerly Associate Physician and Director of Pulmonary Clinic, Massachusetts General Hospital. The Macmillan Company, New York. 153 pages. Price, \$4.00.

A small well written book covering the subject of the sputum with information that is valuable to the general practitioner, as well as those doing detail work with sputum. Description of the macroscopic sputum as well as the study of the stained specimen is given. The subject of pneumococcus type is discussed. The clinical findings of the chest in dis-

ease is covered in rather a brief form. An interesting and instructive book.—J.L.L.

PHYSICAL THERAPEUTIC TECHNIC, by Frank Butler Granger, A.B., M.D., Late Physician-in-Chief, Department of Physical Therapy, Boston City Hospital; Director of Physical Therapy, United States Army; Medical Counselor, United States Veterans' Bureau. Revised by William D. McFee, M.D., Visiting Physician, Department of Physical Therapy, Boston City Hospital; Attending Specialist in Physical Therapy, United States Veterans' Bureau; Consultant in Physical Therapy, Ring Sanatorium. Second Edition. Revised. 436 pages with 135 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$6.50 net.

This new edition, like the former, condenses a large amount of up-to-date information in the field of physical therapy into a volume of compact size and form. Dr. McFee, the colleague and co-worker of the late Dr. Granger, the author, has adhered to the original purposes of the work—to give a record of personal observations, backed up by extensive experience in government military hospitals during the war, and in a large consulting practice. He has added some new practical information resulting from more recent observations. A chapter dealing with physical therapy treatment in diseases of the ear, nose and throat, by Dr. George B. Rice, has also been added. The book enables the general practitioner to carry out, for himself, correctly and with proper understanding, the important therapy recommended.—O.P.D.

PRACTICAL MEDICINE SERIES OF YEAR BOOKS. GENERAL SURGERY. Edited by Evarts A. Graham, A.B., M.D., Professor of Surgery, Washington University School of Medicine; Surgeon-in-Chief of the Barnes Hospital and of the Children's Hospital, St. Louis. The Year Book Publishers, Inc., 1932. Price, \$3.00.

In this volume the editor has maintained the usual high standard in bringing to his readers a summary of the years surgical development by many of our best surgical writers.

With the enthusiasm of surgeons for the use of spinal anesthesia he calls attention to the reports from one of the surgical centers where it was found that spinal anesthesia predisposes to post-operative atelectasis of the lung.

In one extensive report on post-operative tetanus it has been found that about one per cent of all individuals carry the bacilli *Welchii* in their intestinal tract and

this is more likely the source of the infection rather than the catgut used in the operation.

Some very interesting reports are given on the surgical treatment of pulmonary tuberculosis including a newer method of producing immobilization of the apex by the cutting of the scalene muscles called scaleniotomy.

The data collected in this volume abounds in many valuable and instructive reports.—M.B.M.

THE PELVIS IN OBSTETRICS: A Practical Manual of Pelvimetry and Cephalometry including Chapters on Roentgenological Measurement. Julius Jarcho, M.D., F.A.C.S., Consulting Gynecologist, Hastings Hillside Hospital; Attending Obstetrician and Gynecologist, Sydenham Hospital. 140 illustrations, 51 tables. Paul B. Hoeber, Inc., New York. Price, \$6.00.

The above book measures 9" x 6", consists of 365 pages. Print is easy to read, and the 140 illustrations are excellent. The book should be of interest to every practitioner, and of importance to anyone doing obstetrical work. The tables of comparative pelvic measurements of women of all countries, including savages, are of interest.

The chapter on "Abnormalities and Deformities of the Pelvis" is of great interest, also, with a careful consideration of contracted pelvis as an indication for cesarean section, and a discussion of the incidence and management of pelvic contraction in American clinics. There is a careful, lengthy discussion of Roentgen-ray pelvimetry, and Roentgen-ray cephalometry.

There is a bibliography of several hundred article which is of value, and a separate index of several hundred personal names used in the book, which is a new feature.—W.H.W.

THE FAILING HEART OF MIDDLE LIFE, containing the Myocarditis Syndrome, Coronary Thrombosis and Angina Pectoris with a section on The Medico Legal Aspects of Sudden Death from Heart Disease: Albert S. Hyman, A.B., M.D., F.A.C.P. Cardiologist to Beth David and Manhattan General Hospitals and Aaron E. Parsonnet, M.D., C.M., F.A.C.P., Attending Physician and Cardiologist Newark Beth Israel Hospital F. A. Davis Company, Philadelphia. Price, \$5.00.

The book is very nicely bound, 6" x 11", containing 500 pages and 166 beautiful illustrations. The anatomical structure being represented in color and the pathological plates are exceptionally good. Its

logical ideas on treatment as well as diagnosis gives it a prominent place in any practitioner's library.

The subject is divided into six parts. Part one: Coronary Arterial system in health and disease. The anatomy, histology and pathology are extensively explained. Part two: Myocarditis Syndrome. The etiology and general manifestations from early symptoms to gross manifestations. Part three: Coronary Thrombosis and Occlusion in all of its phases. Part four: The electrocardiographic changes associated with Coronary Arterial Disease. This is very nicely illustrated with numerous tracings. Part five: Angina Pectoris. This part is gone into, giving the clinical picture. The views regarding causative factors and manifold aspects of the syndrome. The treatment of this chapter is quite thorough. Part six: The Medico Legal aspects of Sudden Death from Heart Disease. This chapter goes into the importance of medical testimony. The purpose of liability or compensation laws. Negligence actions and actions of accident on accident insurance.—J.G.S.

PRINCIPLES AND PRACTICE OF OBSTETRICS, by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics and Gynecology at the University of Chicago; Chief of Obstetrics, Chicago Lying-In Hospital and Dispensary; Consulting Obstetrician to Provident Hospital, to the Chicago Maternity Center, etc. Sixth Edition, Thoroughly Revised. 1165 pages with 1221 illustrations on 923 figures, 265 of them in colors. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, \$12.00 net.

This volume is essentially a textbook supplying the demands of the student in obstetrics but providing a wealth of material in instructive detail with 1,221 illustrations to be of ever present help to the practitioner when in trouble. Details of diagnosis, therapy and prognosis are clearly and concisely stated, giving preference to the conservative methods in handling obstetrical problems. The author particularly stresses the fact that pregnancy in the human race in at least 90 per cent of the cases is not a physiological but a pathological condition and that prophylaxis and technique are the most valuable means of reducing maternal and infant morbidity and mortality.

Many of the chapters, with the exception of slight condensation, or addition

of newer ideas, remain virtually unchanged but the borderline conditions of internal medicine, which may be associated with or complicate a pregnancy are stressed more fully than ever before.

It is an excellent book, well edited and published.—L.R.P.

PEDIATRICS—The Practical Medicine Series of Year Books. Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School; Attending Physician, St. Luke's Hospital, Chicago, Children's Department, with the Collaboration of Arthur F. Abt, M.D., Assistant in Pediatrics, Northwestern University Medical School; Assistant Attending Physician, St. Luke's Hospital, Chicago. Series 1932. The Year Book Publishers, Inc., Chicago. Price \$2.25.

This volume can be recommended to the busy physician interested in pediatrics, but who does not have the time or inclination to read the enormous amount of literature on this subject. It contains summaries of recent articles and case histories by various authors covering the recent literature on pediatrics. While this book does not take the place of standard textbooks, it should be a valuable adjunct to a physician's library as a handy reference book.—B.I.K.

THE ACTION OF THE LIVING CELL by Fenton B. Turck, M.D. The Macmillan Company, New York. 305 pages. Price \$3.50.

A rather heavy piece of near-medical writing which would be of more interest to that group of research men than the practical physician. The functions of the living cell are considered, under various conditions, such as shock, stimulation, etc. Some rather interesting experiments with cytost are related. The conclusions relative to the shock are at least interesting, dealing with autolysis and toxic changes. Rather exhaustive experiments are given to show that the introduction of cytost will produce the same pathology, experimentally as will trauma and shock to tissues.—J.L.L.

LABORATORY DIAGNOSIS, with Clinical Applications for Physicians. Edwin E. Osgood, M.C., M.D., Assistant Professor of Medicine and Biochemistry; Director of Laboratories, University of Oregon School of Medicine, Portland, Oregon, and Howard D. Haskins, M.D., Professor of Biochemistry, University of Oregon School of Medicine, Portland, Oregon. Illustrated by colored plates and text figures. Octavo. P. Blackiston's Son and Company, Inc., Philadelphia, Pennsylvania. Cloth, \$5.00.

This book is typical of Osgood and Haskin's books. A very complete, well written book covering many topics of in-

terest to the physician. Space is devoted to the collection of specimens, methods of determination, the interpretation of results, and other such important subjects. The use of oxalated blood and the numerous tests which can be performed on oxalated blood are discussed. Urinalysis, blood, gastric analysis, bacteriology, and other miscellaneous subjects are well written. A very valuable and useful book for every physician.—J.L.L.

DOUGLAS COUNTY MEDICAL SOCIETY INVITES YOU

Lawrence was founded August 1, 1854, by a party of free-state advocates, and became the center of anti-slavery activities. From its founding Lawrence was the subject of many attacks from the pro-slavery forces. It has been said that the early history of Lawrence is the history of Kansas. One journalist some years ago remarked that "to suggest that any movement could have started in Kansas other than in Lawrence was equal to laying sacrilegious hands on the Ark of the Covenant." Certainly Lawrence has played no small part in the political, educational, and cultural life of the state.

Today Lawrence is the home of the University of Kansas and Haskell Institute as well as several manufacturing plants, the products of which include pipe organs, ready mixed and patent flours, paper boxes, car seals, and canned vegetables. Radio Stations WREN and KFKU, operated respectively by the Jenny Wren Company and the University of Kansas, are located here. Convention visitors to Lawrence should not fail to see the new WREN studios.

Lawrence has two of the finest hospitals in the state—the Lawrence Memorial Hospital, and the Watkins Memorial which was just completed last year for the use of University of Kansas students.

A fine new modern fire-proof hotel, excellent transportation facilities, several beautiful parks, well paved streets bordered with stately shade trees, paved highways leading into town from every direction, and excellent facilities for meetings make Lawrence one of the most desirable convention cities in the state.

COUNTY SOCIETY NEWS

BUTLER-GREENWOOD COUNTY MEDICAL SOCIETY

The Butler-Greenwood County Medical Society held its meeting at Hotel Lyndon, Eureka, Friday evening, March 3. A skin clinic was conducted by Dr. Paul F. Stookey of Kansas City, Mo., and thereafter a discussion of some contagious diseases caused by filtrable viruses.

Visiting physicians included: Doctors O. J. Corbett, Frank Foncannon, W. B. Granger, C. W. Lawrence and C. S. Trimble, Emporia; E. O. Baker, W. J. Eilerts, C. D. McKeown and G. A. Spray, Wichita; S. F. McDonald, Severy; F. D. Lose, Madison; Harry Lutz, president, Augusta; R. J. Cabeen, Leon; G. E. Kassebaum, G. C. Hall, W. S. Dinsmore, C. E. Boudreau and R. B. Earp, El Dorado. Eureka physicians present included: R. W. Moore, C. D. Baird, Bertram Johnson, J. G. Walker and Wm. E. Janes.

WM. E. JANES, M.D., Secretary.

LYON COUNTY MEDICAL SOCIETY

The Lyon County Medical Society held its regular meeting at the Newman Hospital, in Emporia, at 8 p. m., March 7, following the usual monthly dinner.

Dr. John A. Woodmansee, of Emporia, discussed: "Initial Loss of Weight of the New Born and Its Relation to Early Complemental Feeding." A graph of 25 babies with complemental feeding from the first day and a graph of 25 without any feeding except plenty of water. The first group showed an average return of birth weight on fifth day, while those with water only, reached birth weight on eighth day.

Dr. C. H. Munger, of Emporia, reviewed the specific sera and vaccines that have definite value in the treatment of disease.


The discussion of both papers brought forth a review of the current literature and personal experiences on the subjects.

D. R. DAVIS, M.D., Secretary.

PAWNEE COUNTY MEDICAL SOCIETY


On March 3 the Pawnee County Medical Society met at the Larned State Hospital. A goodly number of the doctors from the surrounding counties were present. They were invited to come and bring their patients and meet with us to hear Dr. R. L. Sutton of Kansas City who promised to be with us and give a lecture on the more common skin diseases with lantern slides. There were about 65 patients presented, some of them afflicted with the more common skin disease and many of them with the most uncommon. Dr. Sutton gave a most interesting lecture using for demonstration the material offered. When he finished the clinic, there was no time left for the other part of the program—the lantern slide pictures. There was only sufficient time for a little get-together meeting before we repaired to the dining room for dinner which had been prepared by the hospital management. Before the coffee was served Dr. Sutton was asked to give us a short talk on big game shooting which he did in his inimitable manner and it was enjoyed by all.

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Following the regular meeting a public meeting was held at the city auditorium where Dr. Sutton addressed 1,500 people, showing lantern slides picturing his experience in the Arctic region.

MARY H. ELLIOTT, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, Monday evening, March 6, President Marvin Hall presided.

Dr. M. E. Pusitz, Clinical Assistant, Department of Orthopedic Surgery, State University of Iowa College of Medicine was the guest speaker and discussed: Reconstructive Surgery of the Upper Extremity. His discussion was accompanied by a moving demonstration of results achieved in surgery of this type.

Although the weather was exceedingly inclement, more than sixty members and guests were present.

EARLE G. BROWN, M.D., Secretary.

SUMNER COUNTY MEDICAL SOCIETY

The Sumner County Medical Society met in regular session March 16, 1933. Motion pictures were shown at the Regent Theater in Wellington at 5 p. m., on the following subjects: "Surgical Treatment of Peptic Ulcers," and "Traumatic Surgery of the Extremities."

At 6:30 p. m. dinner was served at the Roadside Barbecue, following which the meeting was called to order by President McDonnell. There was a report of the committee appointed to draft a fee schedule, and it was decided to send each member a copy of the schedule and to bring it up for adoption at the next meeting.

The committee appointed to study and report on, The Report of the Committee on the Costs of Medical Care, gave a report on this subject with recommendations to the society.

Dr. Hal E. Marshall of Wichita read an interesting paper entitled: "A Discussion of the Report of the Committee on Costs of Medical Care." There was a general discussion of the paper by members of the society, and the discussion

was closed by Dr. Marshall.

R. M. PRICE, M.D., Secretary.

WYANDOTTE COUNTY MEDICAL SOCIETY

The 38th annual party of the society was held at Quivera Lakes on the evening of January 17, 1933. This was the first banquet of the society to which the wives had ever been invited. In spite of the bad weather and icy pavements, there were 199 present for the banquet, including the members of the Wyandotte County Medical Society and their wives, state councilors and their wives, guest speakers and friends of the society. Dr. L. B. Gloyne introduced the speakers and their wives, reviewed some of the important events for the past year and then turned the gavel over to the new president, Dr. C. Omer West, who in turn presented Dr. Gloyne with a duly engraved watch charm as a memento of his office in the society. Miss Genevieve Lee of Bonner Springs rendered a group of vocal solos. Mrs. Anna F. McGlothlan, and Dr. Earle G. Brown were the guest

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speakers of the evening. A very delightful banquet program was enjoyed after which everyone enjoyed the dance.

The party was most successful; brought together for a social time, the doctors and their wives, many of whom had not had such an opportunity before. Enthusiasm for such an event was so marked, that the spring party is being planned.

The regular meeting for the 7th of February did not materialize, due to such extreme cold, icy weather.

The meeting for February 20 was a joint meeting with the Jackson County Medical Society, held at the General Hospital, Kansas City, Missouri.

On March 7, after a lapse of practically two months, the first regular scientific program and business session of the society was held. Dr. H. R. Wahl, Dean of the University of Kansas, School of Medicine, presented a group of very interesting pathological specimens. Then followed the business session, to which the following doctors were elected to membership: Doctors W. J. Feehan, Z. Miles Nason, Daniel R. Wilson, Henry Kassel, and Robert L. Lee. A detailed report was given by the Committee on Public Health and Legislation, concerning investigations and accomplishments in regulating the dispensary, admission, and treatment of dispensary patients at Bell Memorial Hospital. The committee and medical school authorities were complimented upon the work they had accomplished.

Formal action was taken by the society to use their influence in defeating the bill pending in the legislature, which would

permit any one to practice any of the healing arts to enter their practice in any hospital that is tax free.

O. W. DAVIDSON, M.D., Secretary.

R

DEATH NOTICES

KEAN, NAPOLEON DUDLEY, Olathe, aged 65, died February 26, 1933, of cerebral hemorrhage. He graduated from University of Michigan Medical School, Ann Arbor, in 1890. He was not a member of the Society.

LITTREAL, WILLIAM B., Hiawatha, aged 82, died February 19, 1933, of lobar pneumonia. He graduated from Louisville University School of Medicine, in 1876. He was not a member of the Society.

LOGSDON, WILLIAM T., Wichita, aged 74, died February 13, 1933, of chronic nephritis. He graduated from University of Louisville School of Medicine, in 1889, and the Chicago Homeopathic Medical College in 1902. He was a member of the Society.

MATLOCK, CHARLES WILLIAM, Cedarvale, aged 39, died at St. Mary's Hospital, Winfield, February 18, 1933, of edema of the brain. He graduated from Loyola University School of Medicine, Chicago, in 1917. He was not a member of the Society.

MORTON, JOHN B., Nashville, aged 49, died at Wichita Hospital, Wichita, February 4, 1933, of cirrhosis of the liver. He graduated from Kansas City Medical

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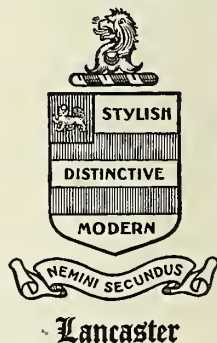
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College in 1909. He was a member of the Society.

SMITH, STEPHEN ELLSWORTH, Topeka, aged 66, died March 25, 1933. He graduated from Kansas Medical College, Topeka, in 1893. He was not a member of the Society.

WRIGHT, JAMES MANN, Demison, aged 62, died February 18, 1933, of bronchial pneumonia. He graduated from Kansas Medical College, Topeka, in 1902. Dr. Wright was for twenty-five years a medical missionary in China. He was a member of the Society and at the time of his death president of Jackson County Medical Society.

First, let me remind you of the annual meeting of the Kansas Medical Auxiliary, which will be held in Lawrence, May 2, 3 and 4. The program for the Auxiliary will be found on page 149 of this issue of the Journal. Read it carefully and make every effort to attend these meetings.

Since numerous inquiries have come asking how copies of the News Letter may be obtained, our national president, Mrs. Percy, has ruled that copies may be had at 10 cents each from the Press and Publicity Chairman. It is earnestly hoped a plan may be worked out so that the mailing list of this News Letter will include every county president.

Remind the doctor husband to bring home not only the state medical journal but the American Medical Association Bulletin as well.

From the Wisconsin Auxiliary Convention Committee comes this attractive introduction to Milwaukee, the "good and beautiful," whither our thoughts are

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

Greetings to our readers who have been steadfast enough to watch for our column. We hope to get news to you regularly again.

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E. F. DeVILBISS, M.D., Supt.
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turning for those days from June 12th to the 16th.

"You have all heard about Milwaukee—read about Milwaukee—and now in a few short months you will be visiting Milwaukee to attend the 1933 annual convention of the American Medical Association, Women's Auxiliary.

"Indian legend tells us that the name 'Mahn-a-waukie' was the naive guttural cry of an Indian brave uttered as he drew his bark canoe from the waters of the present site of the city. In the Ouisconsin (Wisconsin) language this name means 'good and beautiful lands.' In different dialects other Indians are known to have called this spot 'Mah-a-waukie Seepe' or 'gathering place by the river.'

"Father Marquette and Louis Joliet are said to have stopped here on their way to the discovery of the Mississippi River. They marked the site of the city as Milwaukee Bay on their map. This map is now in the possession of a convent in Montreal.

"La Salle and his party stopped in Milwaukee on their way south in 1679, and in that same year the name appears as Millioke in the records of the Jesuit relations.

"It was in 1815 that Solomon Juneau, a young Frenchman, purchased a small trading post in this village, and it was through his efforts that the city was incorporated in 1846 with Juneau as the first mayor."

This seems the time and place to make an announcement of this splendid auxiliary aid, the Handbook, a pamphlet of 44 pages 7½ x 10½ inches. In addition to the foreword and historical sketch the four parts give us: Part I, Reasons for a Woman's Auxiliary, and Review of Present Function; Part II, Administration, Duties and Responsibilities of State Officers and of the State Organization Chairman; Part III, Education, Duties and Responsibilities of the State President, and Chairmen of Program, Hygeia, Public Relations and Press and Publicity; Part IV, the State Convention,

THE ROBINSON CLINIC

Acute epidemic encephalitis is once more a rather common disease. Not since the pandemic of 1918-19, has the medical profession seen as many cases as are reported at this time. The present epidemic also seems to be more virulent than any before. A much higher percentage of cases are dying than in 1918.

The symptomatology is similar to all other epidemics. Lethargy seems to be the most constant symptom; cranial nerve paralysis is usually seen during the course of every case. The most common nerve nuclei affected are the sixth and seventh, but any may be caught by the spreading pathological lesion.

The treatment consists of support, reduction of intracranial pressure and, an attack upon the organism, which is probably a streptococcus. Feeding is important and usually must be done by tubing. Intravenous fifty per cent Glucose and repeated spinal punctures will usually control the pressure symptoms. Specific therapy consists of repeated injections of iodides and salicylates and the use of convalescent serum, when it can be obtained. Due to rarity of the condition and the infrequency of recovery, active serum usually cannot be procured in smaller centers.



Airplane View

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Alcohol
Addiction**

Paul A. Johnson, M.D.
Internist

Purpose, Program, Factors that Make for Success, and Technique. Helpful instruction and suggestions for county Auxiliary units are given and are involved with those for state officers. The Handbook was issued by Mrs. McGlothlan and some of her chairmen during her administration to comply with requests from numerous state presidents and chairmen for a guide for carrying on work in the state and county auxiliaries. In tentative form it was sent to state presidents and national officers with the request that, after having studied it and having used the practical suggestions, they criticize it and send in suggestions for improving it.

If you do not have your copy already, order it now from Mrs. J. Newton Hunsberger, 514 West Main Street, Norristown, Pennsylvania. The price of forty cents for a single copy or \$4.50 for a dozen copies is being charged to help defray the expense of printing and distribution.

When your auxiliary is to hold a meet-

ing, give your local newspaper the time, place and date of the meeting to be, and what is expected to take place. After the meeting, give another item to the paper, state business, social, and other transactions, with a list of names of members present, and when another meeting will be held. This is good news as far as the paper is concerned, and it gives your auxiliary splendid publicity.

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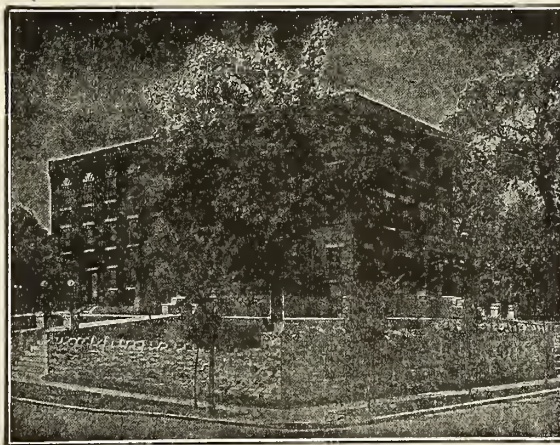
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THE JOURNAL

of the

Kansas Medical Society

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TOPEKA, KANSAS, MAY, 1933

No. 5

ORIGINAL ARTICLES

FRANKLIN E. MURPHY, M.D.

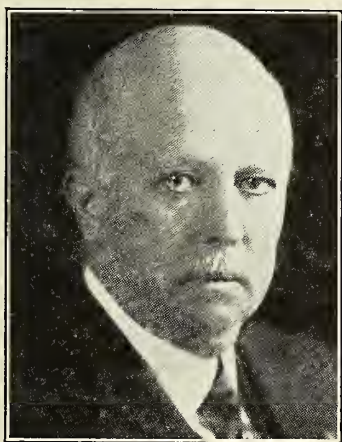
Dr. Murphy and the Medical Faculty

E. H. LINDLEY*

In 1911-12 Dr. Franklin Murphy became a member of the faculty of the school of medicine. The institution was still young and struggling. A teaching post in the faculty was not so attractive as it has become in later days.

Dr. Murphy, however, was profoundly interested not only in the advance of medicine, but also in the opportunity to deal with young men. He realized that one of the most certain means of growth in his science and art was through contact with his colleagues and with his classes. For more than a score of years he was recognized as one of the constructive forces in the development of the medical school.

As a teacher he held high standards for himself and for his pupils. In the midst of a busy practice he gave of his



Franklin E. Murphy, M.D.
1867—1933

time without stint to his class work and to individual students.

In faculty conferences his counsels came to be regarded as unusually sound and wise. Although a man of intense sympathies, he had the gift of impersonal judgment; he possessed courage, also.

Soon after I became acquainted with Dr. Murphy I was impressed with these fine qualities, and more and more relied upon his judgment on matters within the field of his interest and experience.

He will be long remembered as a fine example of scientist-artist who had the passion to light the way for promising youth.

Dr. Murphy as a Teacher

LOGAN CLENDENING, M.D.,*

The outstanding quality of Dr. Franklin E. Murphy's teaching was its absolute sincerity. One felt, constantly, in his presence that he had made an earnest effort to arrive at the exact truth, so far as such a thing was possible, and he presented, without bias, all the data on the subject, pro and con.

In 1905 he had just returned from an extended stay in German universities and was particularly interested in diseases of the blood. He gave us the benefit of the latest ideas from European clinics and his method whetted in all of us a desire to extend our clinical knowledge by contact with Continental masters.

The method of presentation would be that of the great Vienna clinicians. The patient was brought in and the history read and discussed in great detail. The physical examination was made from head to foot, before us.

Dr. Murphy was peculiarly well adapted to the technique of physical diagnosis.

*Chancellor, University of Kansas.

*Department of Medicine.

He had delicate, small hands, and his percussion was particularly finished. He also had a good ear and frequently was able to hear murmurs and other auscultatory sounds that the class was unable to pick up. His long training in life insurance examination work had made him especially exact about all of these things.

He had, I remember, an old-fashioned, monaural stethoscope and could not be persuaded to use any other kind. And his influence was so strong that many of us used this instrument for several years. Personally, in the course of time I found that it was not adapted to my particular talents and I changed over to the modern binaural type, but for several years I felt disloyal about it.

It was method and character that he inculcated more than any particular body of doctrine. He was not, in fact, a particularly ready speaker, but rather slow and repetitious. What we did learn, and what we will always remember gratefully, is the thoroughness with which he taught us to make a complete physical examination and the undeviating intellectual integrity with which he taught us to analyze every detail of a clinical case.

Dr. Murphy as the Bed Side Physician

P. T. BOHAN, M.D.*

In the death of Dr. Murphy medicine has lost a great clinician. Modest and unassuming in manner, his influence on the proper approach to the solution of a clinical problem has not yet, in my opinion, been fully appreciated.

When still a young man he realized that to be an internist in all that the word implies meant something more than merely to announce that he would confine his practice to internal medicine. To prepare himself he spent time, he spent money, he worked. For two years in Europe he received instruction and inspiration from the master clinicians of the past century: Neusser, Nothnagel, Senator, Leyden and Gohm.

It was from these men, that made the Vienna school famous, that he received his ground work as a clinician and as a bed side teacher. Vienna's influence on

American medicine cannot be over estimated. Dr. Murphy thought, and many will agree with him, that "Minerva Medica had her chief temples on the Danube and not on the Spree." It was here that the young, ambitious, Murphy laid the foundation for his future professional career.

Returning to Kansas City in 1903, he immediately began to practice the methods of bed side instruction he was taught in Vienna. His success as a bed side clinician was in large part due not only to his ability to correlate the essential features in the clinical history and the facts obtained from a careful physical examination, but, also, to his ability to understand and adjust social and mental problems. In later years, though still emphasizing the importance of clinical history and physical examination, he was willing and eager for the information obtained from the laboratory and mechanical instruments.

Never ignoring a single word in the clinical history, never hasty in physical examination, always deliberate in his conclusions, his diagnosis was usually correct.

In Vienna, Dr. Murphy lived in the same Pension with Dr. B. W. Sippy, of Chicago, and they became very close friends. When I came to Kansas City, I brought with me a letter of introduction from Dr. Sippy to Dr. Murphy. Dr. Sippy said, "You will find Dr. Murphy not only one of the outstanding clinicians of the country, but a man who is strictly ethical and honest, and you can depend on him at all times." In my 25 years of fairly intimate association with Dr. Murphy, I found him to be everything that Dr. Sippy said and he never failed me but once. On this occasion I was sitting in consultation with him and the late Dr. R. T. Sloan. A slight disagreement came up between Dr. Sloan and me, regarding a certain procedure. From a little remark of mine, Dr. Sloan inferred that I had implied cowardice on his part, which he vehemently denied, and left it to Dr. Murphy. The decision was against me.

As a bed side clinician, Dr. Murphy was the type of man that Harvey Cushing had in mind when he said in a com-

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mencement day address to a graduating class in a medical school, that he saw no reason why teacher, investigator, and practitioner, should not be combined in one single individual and he be none the worse for the mixture.

Dr. Murphy as a Medical Colleague

GEORGE M. GRAY, M.D.*

It is not strange that Dr. Franklin E. Murphy made the unusual success in the practice of medicine that is well known to all of us who were acquainted with his accomplishments, and that he gained the love and respect of his fellow physicians, the medical student who had the privilege of his teachings, and the patient who came to him for relief; when one considers the environment surrounding him as a young man prior to and following his entrance upon the practice of medicine. He was born in Indiana but spent his boyhood days in the state of Missouri where his father was a physician doing a general practice.

My first acquaintance with Dr. Murphy was when he began the practice of medicine in Kansas City, Missouri, about the year 1894 and during the period from 1896 to 1901 when he was secretary of the faculty of the Kansas City Medical College, in which I was Associate Demonstrator of Anatomy. Here he came in contact with such men as Dr. E. W. Schauffler, Dr. D. R. Porter, Dr. Jacob Block, Dr. J. D. Griffith, Dr. George Halley, Dr. S. S. Todd, Dr. B. F. Fryer, Dr. T. B. Lester, Dr. F. W. Johnson, Dr. W. C. Tyree and others of equally high standing in the medical profession. All of these men held teaching positions in the Kansas City Medical College and practiced the healing art in days when there were few rich people in Kansas City. Prevention of disease, alleviation of suffering and cure was their high purpose. Accumulation of money through this service was of secondary consideration. All of these men were of the highest type of citizens and thoroughly ethical. Their code of ethics was the golden rule which applied not only to their fellow physicians but to patients entrusted to their care. As a young physician

under influences of this kind Dr. Murphy naturally absorbed and was influenced throughout his career by the outstanding characteristics of these men so that during his career in the practice of medicine, his honesty and ability were outstanding points in his life.

The selection by him of medicine for his life work was, I think, fortunate for the great interest he took in all professional matters and the interest he displayed in connection with the care of patients who came to him, all indicate that he was interested in his work and that he derived pleasure from the duties connected therewith. Again he was fortunate in selecting the lady he did for his wife. His home and family surroundings all warrant the conclusion that he had a very happy home life.

Dr. Murphy graduated from the University of Pennsylvania in 1893 when twenty-four years of age. He served four years as secretary of the Kansas City Medical College and spent two years in post graduate work in the principal medical centers of Europe, returning to Kansas City in 1904 and thereafter devoted his practice entirely to internal medicine.

Dr. Murphy had one outstanding characteristic or accomplishment, namely, that of remembering names and faces. He knew all of his friends by their first names and the esteem with which he was held by those associated with him in the practice of medicine, depended not alone upon his recognized ability as a physician but to the fact that he loved the people. He had really a great capacity for friendship shown by the esteem with which he was held by his fellow practitioners. He had no enemies and received honorable recognition at the hands of his fellow physicians as councilor of the Missouri Medical Association, a member of the Board of Health of Missouri and in 1909 as President of the Jackson County Medical Society. His death on February 20th was a real loss to the medical profession of this and adjoining states. Loyalty to friends and devotion to the profession he chose for his life work were his outstanding characteristics.

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In conclusion I will quote from Edgar A. Guest on "Service."

To prove their wisdom and their strength
They builded pyramids of old,
But long ere time had run its length
The things were stark and still and cold.

To God they raised both tower and spire,
And lavished on them wealth and skill,
Lit adoration's incense fire,
But round the steps are beggars still.

By tedious toil the stones were piled,
At frightful cost were temples made,
Yet many a mother of a child
Looks out on life and is afraid.

I wandered through the ruins grim
And in my mind the fancy ran
That God's best love must go to him
Who labors for his fellow-man.

Resolutions of the Administrative Committee of the University of Kansas School of Medicine on the Death of Franklin E. Murphy, M.D.

In the death of Dr. Franklin E. Murphy the University of Kansas School of Medicine has lost one of its most devoted friends and the faculty mourns the loss of a brilliant teacher and a beloved colleague. We desire to express to Mrs. Murphy, Franklin, George and Cordelia our heartfelt sympathy and our deep and sincere feeling of loss and to assure them that the University of Kansas School of Medicine will always cherish his memory. We admired Dr. Murphy for his professional ability; we respected him for his high conception of his profession, its duties, privileges and obligations; we loved him as a true and faithful friend. His example has been an inspiration to us, his influence has been profound and far reaching, his memory will live in the years to come.

RALPH H. MAJOR
THOMAS G. ORR
C. C. NESSELRODE.

—R—

AmpleAir.—The purpose of the AmpleAir Filtering Machine is to filter the air supplied to a small office room or bedroom, and more particularly for ridding the air of pollen as an adjunct for the relief of hay fever symptoms. In case of either extremely cold or extremely hot weather a recirculating damper in the entrance duct can be turned, thus stopping the incoming air and recirculating and filtering the air within the room. It is claimed that the AmpleAir will supply sufficient filtered air for a small office or bedroom occupied by two or three people and will serve as an adjunct in the relief of symptoms of hay fever. Independent Air Filter Company, Chicago. (Jour. A.M.A., February 18, 1933, p. 497.)

OIL OF WINTERGREEN (METHYL SALICYLATE) POISONING

Report of Case

HUGH L. DWYER, M.D.*

Oil of wintergreen is commonly used as a household remedy for rubbing painful joints. Very few people are aware of the fact that fatal poisoning may result when a young child swallows a small quantity. It has been stated that 5 to 6 cc., or one to two teaspoonsful will probably cause death in a child unless adequate antidotal measures are immediately instituted.

The following case report will illustrate the dangers of having this powerful drug in the home within the reach of children:

CASE REPORT

M. J., a girl aged 15 months, just before being put to bed one evening, drank from a bottle of oil of wintergreen that was opened preparatory to applying it on her neck for swollen cervical glands. About an hour later she vomited and this continued at intervals throughout the night. She drank large quantities of water but was unable to retain it long. By morning she was having frequent involuntary bowel movements and was brought to the hospital at 7 a. m., ten hours after ingestion of the drug.

PHYSICAL EXAMINATION

She was a very well nourished child, the pupils were dilated, the tongue was extremely dry, she took water ravenously but it was immediately rejected. There was marked air hunger, cyanosis and convulsive twitching of the arms and legs. The temperature was normal. The heart was rapid and coarse guttural rales were heard throughout the chest. Her eyes were sunken and glassy, and her dry lips and skin gave evidence of marked dehydration. She passed much flatus and small stools which had the odor of wintergreen. The urine reacted for acetone and diacetic acid. The CO₂ combining power was 36.5 per cent by volume. The blood serum and urine gave positive reactions for salicylates.

The treatment was directed toward combating the acidosis, dehydration and cyanosis. A large amount of water hav-

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ing been rejected by the stomach it was felt that it was too late to expect any benefit from lavage. She vomited immediately when soda bicarbonate solution was given, proctoclysis was attempted but it was not retained. Hypodermoclysis of Hartman's solution and 2 per cent glucose was started and she was placed in an oxygen tent. The color improved for a short time but the breathing became stertorous, the convulsions generalized, the feet slightly edematous and death occurred three hours following her admission.

POST-MORTEM EXAMINATION

Briefly, this revealed numerous sub-pericardial hemorrhages in the heart and lungs; the heart was dilated and flabby; the bronchi were clear, no pneumonic areas were found but considerable blood exuded from the cut surface of the lung. On section, a slight lymphocytic infiltration was present around the bronchi.

The liver weighed 750 gm.; was a deep reddish-purple color and from the cut surface exuded a large amount of blood. Section showed that the central veins and sinusoidal endothelium stood out distinctly. The spleen was slightly enlarged, weighing 88 gm. the cut surface was congested and sections showed prominence of the malpighian bodies. The kidneys, weighed 94 gm. and the cut surface showed a reddish-purple congested surface. Cloudy swelling of the tubule epithelium was noted. The bladder urine also gave a positive reaction for salicylates.

The mucosa of the intestinal tract was normal, as also was the lymph glands, thymus, supra-renal glands and pancreas.

COMMENT

Wetzel and Nourse in 1926 reported a case of fatal poisoning in an infant 21 months old after taking 10 cc. of oil of wintergreen. Judging from these and the cases recorded since that time the lethal dose is small, according to Wetzel and Nourse about 0.5 cc. per kilo, or slightly less than two teaspoonsful for a child of three years with an average weight of 32 pounds. The toxicity they say, may be ascribed to the fact that the

drug is slowly destroyed within the body. They found unchanged oil in the urine of their patient about 30 hours after ingestion.

Olmstead and Aldrich in 1928 reported two cases of methyl salicylate poisoning in children, both of whom recovered. These authors stress the importance of the acidosis which they believe is a renal acidosis the cause of which remains in doubt. They attribute the successful outcome of their two cases to the large amount of soda bicarbonate taken by mouth; they also gave 5 per cent dextrose hyperdermically. A review of the literature by Olmstead and Aldrich revealed ten fatal cases of methyl salicylate poisoning, three of which occurred in children after taking oil of wintergreen.

The principal effect of the drug is on the nervous system. This is probably due to a direct action on the medulla because the symptoms come on rapidly after the drug enters the stomach. It is also possible that it is the result of small hemorrhages into the parenchyma of the brain or more diffuse meningeal hemorrhages.

The congestion of the visceral organs and the multiple subserous hemorrhages suggest that the drug has a powerful toxic effect on the capillaries.

In the present case the outstanding clinical symptoms were protracted vomiting, hyperpnoea and dehydration. The course was rapid, death occurring 13 hours after ingesting the oil of wintergreen, the quantity of which was less than 4 teaspoonsful and was estimated at 2 teaspoonsful.

The treatment should be directed toward overcoming the acidosis by large amounts of soda bicarbonate by mouth and by rectum, as well as glucose solution intravenously and subcutaneously. In the case of an infant that is vomiting violently, this may be very difficult.

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SCOLIOSIS IN CHILDREN

C. B. FRANCISCO, M.D., F.A.C.S.*

Scoliosis which is lateral curvature of the spine with rotation, apparently is on the increase. One factor is the increase of infantile paralysis which so often unbalances the muscles of the back in growing children resulting in curvatures. One also gets the impression there is an increase in the number of so-called idiopathic curvatures of the spine that occurs in the pre-puberty stage. However, this may be due to the fact that parents are presenting their children for examination in such cases more than they formerly did. For years I have been impressed with the fact that the large percentage of these cases I have seen lived in the country or in small towns; rarely was a case seen that lived in the city.

There are three recognized causes of scoliosis: first, congenital anomalies, such as, wedged shaped or absent bodies, fusion of the ribs, extra or absent ribs or other anomalies accounting for a rather small per cent of the number of the cases. The second cause is the result of disease, such as infantile paralysis and empyema with resection of the ribs. The third cause is the so-called developmental type which occurs most often in girls; perhaps 90 per cent of the cases are in girls and usually noticed about the age of 12 years which is the beginning of cessation of growth and the change from childhood to maturity, but may occur around the age of 5 which is the period characterized by the change of babyhood to childhood and associated with the closing of the centers of ossification in the bones. When a curvature is noticed at the latter age an unrecognized attack of polio should be thought of.

There has always been the feeling that the ductless glands were possibly a factor in determining the degree of scoliosis that might result in a given case. Certainly there is a general unstable condition in some of the extreme types of scoliosis suggesting that the general bone metabolism must have been interfered with in some way to have produced such

extreme deformities. At the present time there is no definite information on what the endocrine disturbance is, if it is a factor in causing or aggravating the condition.

In the congenital type there may be no evidence of deformity until the child is able to sit up or even begin to walk but a curvature noticed at these periods is very likely to be the result of a congenital anomaly of the spine or ribs, if there is no history of the child having had infantile paralysis. These cases can usually be proven by *x-ray*, and the management of them is rather difficult. Anything that will tend to straighten their spine will interfere with their growth and development, therefore, one usually limits their efforts to plaster shells to be worn when sleeping and to promote their general welfare, putting on day supports as indicated. Some of these cases apparently do well but the tendency is for them to gradually get worse. One often sees evidence of slight congenital anomalies in the pre-puberty type of developmental scoliosis and one cannot help but be impressed with the idea that they may be a factor in some of these cases.

The polio cases are usually quite evident soon after the onset of attack of paralysis, but occasionally may be delayed in the development until the pre-puberty stage and then one is in doubt as to what extent the paralysis is the cause of the condition. It will, therefore, be seen that the pre-puberty stage is the important stage in the development of the child and this period which corresponds to the maturity of animals the importance of which has long been known to the breeders of fine stock, but it is only recently that any attention has been paid by those interested in this work to the special care of children at their maturing age. Every child after it reaches 11 years should be rather carefully watched as to diet and as to its development. At about this age children begin taking their own baths and the parents sometimes do not see their children's back for quite some period of time and then are very much shocked at accidentally observing their curvatures. It is my impression that this type of curvature progresses

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rapidly for the first three or four weeks after which the progress is rather gradual. I have had the experience of observing a slight curvature in a child that had not been previously noticed in the course of a routine examination and would therefore be in doubt as to the length of time it had existed. These cases were always requested to return in a week at which time a very definite increase in the deformity could be noted.

In seeking a possible explanation as to why there are more cases occurring in the country than in the city I was struck by the fact that country children as a rule drink less milk than children in the city although they have a great supply of milk. Possibly the handling of the milk creates a distaste for it. I have become convinced that milk is a necessary food for maturing children and one almost never observes a lateral curvature in a child who is not and has not definitely been a non-milk drinker. I have been so impressed with this observation that I have remarked that all of the developmental pre-puberty types of scoliosis could be prevented by giving all the children plenty of milk over this period of time. I do not mean to say that every child that does not drink milk during their pre-puberty years will necessarily develop a lateral curvature, but I do say that with very few exceptions children that develop lateral curvatures are non-milk drinkers. I feel that this observation should be passed on to the parents believing they would insist on the children drinking milk if the importance of it was realized.

None of these structural cases can be cured. Therefore, it is quite important that the condition be recognized early and the child put to bed in order to relieve the weight of the superimposed head and shoulders as it is this weight which causes the softened bones to become deformed. After a period of rest in bed, nature seems to be able to make some progress in the hardening of these bones and they can then be gotten about with supporting braces, taught exercises and improved, or at least prevented from getting worse. They should wear supports as long as they are growing. This

means that the case that resulted from infantile paralysis or congenital anomaly may have to be observed and watched over a long period of time.

Our usual plan of treatment at Bell Hospital is to place these children on Bradford frames with Morrell saddles for about six weeks, then get them up in a well fitting back brace. After they have their brace they are sent to the Physical Therapy Department where they are taught self corrective exercises and kept in the hospital some three or four weeks or until they have learned to do the exercises well. They are then sent home with their frame and instructed to sleep on it every night and wear their brace during the day and asked to report back for observation in three months, and to keep in touch with us, and keep up the exercises.

The question of stabilizing these scoliotic spines by operative procedure has I think been rather disappointing although may be a valuable aid in certain types of cases but as long as the bones are growing, even if a stabilizing operation is done, one has to continue with support on account of the unequal weight bearing that results from the deformity. Personally, I feel that the operation of stabilization is of more benefit in the paralytic than in the developmental case for the reason that in the developmental case one usually gets a compensatory curve, that is, the "S" curve, that balances the back in very much the same way that the posterior curve in the upper dorsal region balances the anterior curve of the spine in the lumbar region. In congenital anomalies and poliomyelitis as well as in the rib resection cases, the curve is apt to be poorly compensated and the bodies less rotated which offer a better opportunity for a bone graft along the curve to become supporting.

I feel that it is important to realize that these cases are accidental, meaning that we all go through this developmental period and that with faulty diet or some upset in our metabolism incident to the changes of growth which may be sufficient to disturb the balance that controls bone development that nature is able to correct in time but the damage cannot be

changed. These individuals should be impressed with the fact that they are perfectly normal persons, capable of living normal lives and encouraged to do the normal things in life, being warned that they should avoid excessive physical exertion.

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SOME PHASES OF CONGENITAL SYPHILIS

CHARLES C. DENNIE, M.D.*

One must always keep in mind that congenital syphilis and the acquired type are two entirely different and distinct diseases. So distinct are they that the differentiation can be made between the two from clinical observation alone. The manifestations of the acquired disease in the adult are the result of the action of the *Spirochetæ pallidæ* upon the adult cell. The manifestations in the congenital type are the result of the action of this same organism upon the embryonic and immature cells.

The stigmata of the congenital type are the result of the interference with the growth of the embryonic cell. From such interference in the early life of the embryo are developed the well known characteristic details such as Hutchinsonian teeth, the teeth of Henri Moon, lack of development of the upper jaw, bulging forehead, nasal spurs, syphilitic hydrocephalus, large veins in the scalp, and a little later, interstitial keratitis and a host of other signs and symptoms. No matter how thorough the treatment of the child may be (ex utero), he will develop one or all of these signs in spite of it. The influence upon the embryonic cell is indelible.

A child who develops these manifestations with or without treatment, must have received the syphilis infection while in the embryonic state. The train of calamities that befall him in later life is the tragic part of this disease.

His life is shortened. Were it not so there would be many individuals running about the streets with Hutchinsonian teeth or interstitial keratitis. Yet these two findings are so rare that an individual so afflicted who has reached

the age of 35 years is a curiosity even to those skilled in the detection of this disease. Even the layman, radio and pseudoscientifically educated as he is, would recognize the condition. Yet the skilled observer is familiar with these signs in children and considers it an every day occurrence. Less than two decades ago the syphilographer would hesitate to make a diagnosis of congenital syphilis unless the triad of Hutchinsonian findings were present. Hutchinsonian teeth, interstitial keratitis and deafness. The present day syphilographer recognizes the fact that less than five per cent of all those afflicted with this congenital disease have these signs. One cannot say that this entire group of children are mentally deficient yet their mentality is far below that of children who are free of this disease. I would estimate from the work we have done that their I. Q. is about seventy per cent. It is true that in later life a certain percentage of these children may not have any evidence of cerebrospinal syphilis that one is able to detect, either by serological findings or clinical observation, yet in their embryonic life they were perhaps entirely flooded in all their parts by the organism of syphilis. The influence upon the primitive developing cells of all parts of the body must have been terrific. How could the brain escape? These children are more susceptible to all the infectious diseases than normal children.

Not only has the primitive cell been hampered in its formation of distinct tissues but these developed tissues are low in their immunization index to such an extent that they are easy prey to the invading organisms of other varieties. The lymphatic system is enlarged out of all proportion. The reticulo-endothelial system as a whole is stimulated to its greatest height; consequently the resistance to ordinary infection is very low. Skin infections, middle ear abscess, mastoiditis, pneumonia and other infectious diseases are responsible for the death of almost 50 per cent of these children, before they have reached the age of three months.

Their physical growth is retarded.

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When we see a child who will not gain weight in spite of the fact that he takes his full quota of food, has no intestinal troubles and is suffering from no other diseases except perhaps mild anemia, we immediately suspect congenital syphilis and half the time we are correct*. Proper treatment of these children with the anti-syphilitic remedies is often responsible for rapid growth. Quite often a diagnosis of rickets is made and treatment along that line is responsible for some improvement. But quite often a rickety child with a negative Wassermann reaction is really a syphilitic child in the silent phase of that disease. Nearly all congenital syphilitic children belonging to this group have some degree of rickets. The converse is not true. The large square head of the pubescent syphilitic is often due to a varying grade of internal hydrocephalus. I do not believe that it is always possible to absolutely differentiate between rickets and congenital syphilis in spite of the so-called difference in the pathological findings in their skeletal systems.

It is in these types of children that the most bizarre findings develop. Conceding that the *Spirochatae pallidae* gains entrance to the embryo soon after it begins to grow, it is entirely possible, for the developing body to pass through all the stages of syphilis before it is born for it seems that the course of the disease is shortened in an amazing manner while in utero. When the child is born the disease may escape coarse detection and the Wassermann reaction may be entirely negative and remain so for many years or for the life time of the child.

Findly is responsible for the statement that these children may drift toward a positive Wassermann at the age of five years. The signs that these children later show have their inception at the beginning of embryonic life and in all probability in their developed state represent a stage of syphilis even beyond the tertiary state. This fact has an important bearing upon the adoption of children. This silent phase so characteristic in all type of syphilis is respon-

sible for many mistakes in the diagnosis of syphilis in the new born. Such disease as simple optic atrophy and congenital deafness may be in some instances at least but the result of a rapid fire syphilis running its course while the child is in utero. We know for certain that of all the children who develop skin lesions at or before the age of six months, 50 per cent have positive findings in their cerebrospinal fluid. That involvement had its beginning in the unborn child. In most of the children who belong to this group, the organism of syphilis is implanted into their bodies before the formation of their skeletal system.

The second group of children are the ones in whom the infection is implanted sometime between the formation of the skeletal system and birth. These children present an entirely different aspect. They may often escape most of the visible signs of the disease. A large number bear no stigmata. Twenty-five per cent of all the children in our clinic belong to this group and are classified as latent syphilis. They may have some indefinite findings such as epitrochlear or inguinal glands. The parents may tell you that during the period of infancy the child was strong but was slow in school or physically weak but were it not for the fact that they were one of a syphilitic family or the finding of a positive Wassermann reaction when their blood was examined, one would not dare to make a diagnosis of congenital syphilis. These children must have had the infection later in their intra-uterine life for how else could we account for this strange occurrence. The nearer the infection was implanted in the relation to their birth, the more likely are the subsequent signs and symptoms to resemble those seen in the acquired type.

The children that belong to this second group are not nearly so likely to suffer many of the disasters that fall upon the embryonic type. They are not so likely to suffer from passing infections; they suffer less from the rachitic changes, and do not have the stigmata. Their I. Q. is a little higher but they do develop central nervous system syphilis, at a later age. The embryonic type show strange

*Personal conversation with Dr. Harry Berger.

manifestations of the skin and mucous membranes, peculiar to them such as snuffles, eczematoïd excoriating syphilis of the skin especially about the mucous orifices. This type of cutaneous syphilis about the mouth so closely resembles an eczema that it is often mistaken for it, while the same type that occurs about the anus and genitals resembles diaper scald. The desquamating palms and soles with their deep red tinged, glistening aspect occur almost exclusively in these children. On the other hand the second group of children will often have the same type of secondary symptoms that the adult acquired syphilitic presents, such as the papular eruption, split papules at the corner of the mouth, mucous patches and condyloma about the mucous orifices. These statements are not absolute but only relative.

The children of the second class are more likely to live a longer life and since many of them never develop stigmata, it may never be discovered that they were born with congenital syphilis. They may become important members of society and make a place for themselves among the upper half. I believe that a considerable number of those who develop dementia paralytica or locomotor ataxia in young adult or early middle age, belong to this group. It may be that they are not lying when they deny venereal disease of any type. I have seen destruction, bone lesions, notably the loss of the nose occur in youngish individuals who gave a negative history that I am satisfied belonged to the congenital syphilitic class.

Contrary to general opinion the congenital syphilitic family may be large. We have in our clinic 26 families with 127 children. Over ten per cent of our congenital syphilitic children belong to large families. This finding adds a strange factor to our problem. We recognize the fact that syphilis in children takes away about ten per cent of their mental efficiency. But let me state that there are some of these afflicted ones who are normal or above normal mentally. The factor of inherited traits now makes its entrance.

The parents of these children are as a

whole somewhat mentally subnormal. Observation of their reactions while working with their children leads us to this view. I cannot conceive how it is possible for parents to rear a large syphilitic family in which some or all of the children had abnormal manifestations without making an effort to find out what it was all about; it must be ignorance. In one family of five children the mother stated they all had peculiar eruptions within three months after birth yet it was the youngest child that she brought to the hospital because of a severe cold and the examiner found the secondary eruptions while making a complete physical examination. I believe that to the already subnormality in the child caused by congenital syphilis is added the inherited strain of subnormality visited upon the child by his parents. Such a child has a small chance to gain an enviable position in the economic or intellectual state of society.

The majority of parents who have but one child and that syphilitic, consciously limit their parenthood to that one child because they have intelligence enough to know that what they are doing is a crime. Conversely many of the parents with large families proceed to have more children with the full knowledge that they will bear the marks of this disease all the rest of its life, a sure sign of mental subnormality.

The greatest problem in the care and treatment of the congenital syphilitic is the diagnosis and treatment of syphilis of the central nervous system. It is different from the type that is present in the adult. The *Spirochetæ pallidæ* has interfered with the embryonic cell from the beginning and thus made it take a diverse path and it has certainly interfered with the growing cell. Thus, it not only interferes with the cell growth but destroys that small cell while growing. The resultant cerebrospinal syphilis is not a pure type but grades from one into the other so unperceptibly that it is often almost impossible to tell where one begins and the other leaves off.

About three per cent of all cerebrospinal syphilis falls into the group of juvenile dementia paralytica. This is

rarely a pure type of disease but is nearly always crossed with tabes dorsalis. The origin of the juvenile paretic is a paradox. One would naturally suppose that a neurotrophic strain of *Spirochete pallida* was responsible for this form of disease. Such is not the case. An investigation carried out by the author in which he made an intense study of the children of paretic fathers failed to reveal a single case of dementia paralytica in any of their offspring. Not only did the children escape this type of disease but many of them apparently escaped the syphilis of the somatic system. Instances have been reported where the wife was so afflicted but this observation was not made in any of our cases. Enough work was done to show that the transmission of the paretic form of this disease from one afflicted with dementia paralytica is rare. The parents of the children suffering from dementia paralytica either did not have syphilis of the central nervous system or they had the meningo vascular type.

The oldest child in our series developed this parenchymatous disease, the rest of the children as a rule escape although they will have the somatic type, but it becomes less noticeable in the younger children and may even be absent in the youngest. The fury of the disease seems to be visited upon the first born. In Paul O'Leary's experience the youngest child has been the paretic while the older ones escaped.

Quite often the oldest child will have optic atrophy while the rest of the children may escape the disease altogether. The treatment is almost hopeless. In only 20 per cent were we able to secure favorable results even with the aid of malarial therapy. The remainder either died or were sent to an institution for the feeble-minded.

We cannot agree to the dictum that there is a neurotrophic strain of *Spirochetæ pallidæ* transmitted to the offspring which is responsible for their paretic state.

The juvenile tabetic quite often springs from a tabetic family. If the father is young when he develops this type of disease, the wife and some or all of the chil-

dren may be simultaneously affected. If these children are secured in the pre-tabetic state there is some hope of their ultimate recovery providing malarial therapy is included in their course of treatment. I have in mind two families in which the father developed tabes before 30 years of age. In the one family the father, mother and five children all developed this type of the disease. In the other the father of seven children developed this disease soon after the birth of the oldest girl, the mother and none of the children ever presented any signs of it. The oldest girl is now 35 years of age.

If the offspring develop tabes dorsalis after the age of 20 years, the disease can often be controlled by ordinary treatment. There seems to be a neurotrophic trait in the *spirochetæ pallidæ* that is transferred to the offspring by the father through the mother.

The meningovascular type of syphilis of the central nervous system follows no known rule. The father and mother may or may not have this type of disease. Some of the children of the same family may present symptoms and some may not. In one family of five children one child was so afflicted, the others were free. It must be understood of course that the diagnosis was not only based upon physical inspection but upon the examination of the blood and cerebrospinal fluid.

The meningovascular type of syphilis responds to treatment most readily and the immediate prognosis is good. In more than 60 per cent of our series the blood and cerebrospinal fluid became negative and the clinical symptoms disappeared under continued treatment. It is our impression that these children do much better when malarial therapy is given. This statement holds true in all types of syphilis in children whether it be of the central nervous system or the somatic involvement. Children whose disease has progressed to the point of destruction or cicatrization are hopeless from any standpoint of treatment.

Bone and Joint Syphilis: Since the modern methods of treatment have been instituted the number of children with bone and joint involvement has been

gradually diminished. Ten years ago in our clinic, the showing was about ten per cent; at the present time it is less than half of that number. The discovery of syphilis in the father and more efficient treatment of his disease before marriage has produced an intimidated spirochetæ which is either not transferred to the mother or is transferred in a less virile form. I believe that the per cent of congenital syphilis of all types is on the decline because of this state of affairs.

Syphilis of the cardiovascular system (aortic regurgitation, aortitis and aneurism) is practically unknown. I have recognized but two well developed cases in the last ten years. Others have reported a far greater number but our experience has been to the contrary.

The routine examination of the eye background of the congenital syphilitic has opened a vast field of possibilities. We have found a large per cent of these children show some findings in this organ. The larger percentage falls into the group of retinitis, choroiditis or a mixture of the two. The lesser percentage have to do with the optic nerve. It would be absurd to claim that all of these changes were due to syphilis or that these signs found in the absence of other manifestations or the presence of negative serology were due to the same cause but the observation must be regarded with some gravity. Many of these eye conditions clear upon the institution of antisymphilitic treatment in spite of negative findings of all kinds.

Syphilis of the viscera is an almost universal finding in the new born congenital syphilitic with florid manifestations. I believe the enlargement of the spleen and liver at this early age is not due to disease present in those organs but can be explained upon the basis of response of the reticulo endothelial system. The macrophages, plasmacytes and lymphocytes invade and enlarge these parts because of their migration there to combat the organism of syphilis. Enlarged liver and spleen does not contraindicate treatment with the arsphenamines. They decrease in size to the original with a small amount of treatment. Enlargement of

these organs in the older child is nearly always an indication of syphilitic disease. The percentage of such involvement is very much smaller than it is in the infant. The arsphenamine or malarial therapy are distinctly contraindicated.

The diagnosis and treatment of prenatal syphilis: That syphilis is transmitted to the fetus by the mother is generally accepted; upon this fact modern treatment has been built. The detection of syphilis in the young mother during her first pregnancy is impossible from the standpoint of physical examination alone. The Wassermann reaction is the main stay of the obstetrician; without it he would be lost since he would be unable to make a diagnosis in more than 10 per cent of the cases.

From figures that we have been able to gather from various sources we arrive at the conclusion that the number of infected mothers is about ten per cent. Thirty per cent of pregnancies in women are premature because of these conditions. Therefore treatment should be instituted as soon as the pregnancy is discovered. In order to secure the best results this treatment should be commenced before the third month; the reason is obvious. Syphilis of the fetus is essentially an involvement of the blood vessels and the bone forming organs. The basis of the skeletal system is almost completely formed at the fourth month. These stigmata so well recognized are due to interference with bone growth. If treatment is not instituted before the formation of the skeletal system, many deformities will develop in the child in spite of energetic treatment of the mother after the fourth month of pregnancy. Treatment should consist of the administration of the arsphenamines, bismuth and mercury. McCord has found that at least nine doses of arsphenamine are required to insure a living, healthy child. It is my opinion that one must administer at least 16 doses of neo salvarsan and 20 doses of bismuth to insure a satisfactory result. The mother should be treated during each pregnancy no matter what her serological findings may be. Very few accidents occur in the treatment of these mothers. The per-

centage is not so high as it is in the non-pregnant women.

The statement has been made that a minimum amount of treatment given to the mother will insure a living child. This assertion is only too true, but what a living child. This is an interesting observation but a dangerous procedure.

We receive many infants into our clinic whose mothers have had such treatment. Many of them have negative Wassermann reactions which they may retain for years. A great number have an enlarged spleen and liver while others have positive serological findings in their cerebrospinal fluid. The treatment has only been sufficient to mask their symptoms or to produce negative serology without eradicating the disease. Every one of these infants should have an examination of their cerebrospinal fluid and subsequent treatment should be energetic and thorough.

The time will come when practically every congenital syphilitic will have a course of malarial following their preliminary treatment with the arsphenamine, bismuth and mercury. Children who have received this treatment do much better than those who are treated in the ordinary way. The advantages are:

1. A remarkable growth in weight and stature.
2. Increased resistance against the disease of syphilis.
3. The efficiency of subsequent treatment is greatly enhanced.
4. Syphilis of the central nervous system may be greatly reduced.
5. Its use in the treatment of interstitial keratitis results in a much better eye.

—R—

Because an x-ray apparatus is a mechanical contrivance, many persons believe that it is necessary for the operator merely to press a button and presto! out comes an x-ray film on which is printed the diagnosis of the existent disease. Such an erroneous conception of the use of the x-rays explains why so many persons fail to understand that an examination of this character must be conducted by a radiologist—a physician whose specialty is restricted to the use of the x-rays and radium in the diagnosis and treatment of disease, Dr. L. J. Menville explains to readers of "Hygeia," The Health Magazine.

A CASE OF INFARCTION OF THE LIVER FOLLOWING CHOLECYSTECTOMY

R. W. KERR, M.D.*

Following is a report of an autopsy recital of the case is considered interesting because it so well illustrates one of the dangers of gall bladder surgery.

from a neighboring hospital. A complete

The patient was a white female, 57 years of age. She was practically well until two weeks before admission to the hospital, at which time she began having attacks of severe pain in the right upper quadrant which required morphine for relief. These attacks came on every few days and after the first she was slightly jaundiced.

On admission to the hospital, examination revealed a well nourished patient showing some jaundice. The heart was enlarged to the anterior axillary line, and there was a systolic murmur heard best at the apex. The blood pressure was 186/100. The lungs were negative. The abdomen was quite tender in the right upper quadrant and there was some rigidity in this region.

Laboratory report showed hemoglobin 84 per cent, white blood cells 8,700, polymorphonuclears 64 per cent. The urine showed a 3 plus albumin and a positive test for bile.

Two days after admission to the hospital, a cholecystectomy was done. Considerable difficulty was encountered in freeing the adhesions about the neck of the gall bladder, and in exposing the ducts. Hemorrhage was encountered which was difficult to control, and what was thought to be an anomalous branch of the portal vein was tied off.

The patient did very well for the first 24 hours at which time her pulse was 110 and temperature 101. No untoward symptoms were noted; however, a blood count taken about this time showed white blood cells 27,600 and polymorphonuclears 86 per cent. Three hours later she showed a marked change with a pulse of 165, temperature 107.4 and respiration of 15. The blood pressure was 84/60, the patient was evidently in extremis and

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died about an hour and a half later.

The anatomical diagnosis at autopsy was as follows: Massive infarction of the right lobe of the liver following ligation of the portal vein and right hepatic artery with thrombosis of the portal vein; impacted biliary calculi near the ampulla in the common duct; surgical absence of the gallbladder and section of the common duct; surgical incision of the upper right quadrant; jaundice; fatty degeneration of the liver; generalized arteriosclerosis; hypertrophy and dilatation of the heart; acute and chronic myocarditis; fragmentation and segmentation of the myocardium; chronic nephritis; Chiari network of the right auricle; Ghon's tubercles of the lungs; chronic splenitis; retention cysts of the kidneys; Meckel's diverticulum; acute adrenalitis; thrombosis of the adrenal vein.

On opening the pleural cavity the heart was hypertrophied, weighing 425 grams, flabby in consistency and the valve rings were dilated. There was some calcification in the aortic valve cusps and the coronaries show some sclerotic changes. There was a thin fibrous Chiari band across the right auricle.

The peritoneal cavity shows a few fresh adhesions about the operative wound and the liver was about 2 cm. below the costal margin in the right mid-clavicular line and presented a striking picture, weighing 2330 grams and measuring $29 \times 25 \times 9$ cm. The right lobe of the liver showed a mottled appearance with deep reddish-purple areas measuring as much as 4 cm. in diameter. These areas were fairly firm in consistency and sharply outlined from the neighboring liver tissue, which was grayish-brown in color and normal in appearance except for a distinct greasy feel and look. The left lobe showed no discoloration and the line of demarcation between the right and left lobe was quite distinct.

On section of the liver the line of demarcation was even more distinct. Most of the right side was firm and reddish-purple in color. Here the liver architecture was obscure and there were many small spaces such as are seen on the cut surface of an emphysematous lung. At the junction of the right and left lobes

there was a definite irregular line about 1 cm. in width which was congested and reddish in color in contrast to the normal liver tissue to the left.

On examination of the blood supply to the liver there was found a ligature about the portal vein at the hilus of the liver just before it divides. This ligature also included the right branch of the hepatic artery just after the bifurcation so that the left branch was not occluded. Extending into the liver from this point of occlusion of the portal vein there was an ante-mortem thrombus about 3 cm. in length. Thrombi were also noted in some of the smaller portal vessels in the liver substance. The hepatic veins showed no involvement. There were two small impacted gall stones in the lower end of common duct.

The spleen weighed 165 grams, was soft in consistency and on cut section the pulp appeared congested.

The gastro-intestinal tract was essentially negative except that $11\frac{1}{2}$ cm. above the ileocecal valve there was a diverticulum measuring 8 cm. in length and 4 cm. in circumference.

Histologically, the heart muscle showed fragmentation and segmentation with granular degeneration and many of the vessels in the stroma contained polynuclear leukocytes.

Different blocks taken from the liver showed extensive areas of incomplete necrosis. This necrotic tissue still retained the general architecture and showed very extensive fatty change effecting particularly the central and mid-zones. The cells beneath the capsule did not seem to be as much effected, though these and the section from the left lobe of the liver showed extensive fatty change about the central zone.

The spleen showed an increase in fibrous tissue with the sinusoids standing out more distinct than usual. In the pulp there was an increase in the number of polys, many of these being in the sinusoids. Extensive areas of congestion and a suggestion of hemorrhage were noted in some places.

The adrenal gland showed considerable disintegration of the cortex with many foci of polynuclear leukocytes as

well as mononuclear cells. Thrombi were seen in some of the adrenal veins.

The surgically removed gallbladder showed the wall to be thickened and many larger and smaller stones present in the lumen. Near the neck of the gallbladder a few small ulcerations could be seen in the mucosa.

Two rather striking lesions were present, the relation of which to death was not entirely clear. One of these was the presence of an acute and chronic myocarditis with considerable disintegration and degeneration of the muscle fibers, indicating that death might have been of a cardiac character.

The other lesion which was equally striking was the presence of a massive infarction of the right lobe of the liver following ligation of the portal vein and the right branch of the hepatic artery. This factor could have produced such hepatic insufficiency, resulting in possible toxemia, which may have reacted upon the myocardium and brought about a myocardial insufficiency and in that way produced death.

It was interesting to note that the adrenal gland was the seat of an acute inflammatory reaction associated with thrombosis of the adrenal vein, the significance of this was not clear. The unusually high terminal temperature suggested a severe toxemia such as might arise from sudden development of hepatic insufficiency.

Infarcts of the liver in the strict sense are infrequent. Zimmerman in 1930 reviewed the literature and recorded only 27 cases and then reported one of his own in a child 31 hours of age. Of these cases reported three are questionable as the patient recovered and the liver was not examined microscopically.

Of the cases reported none were of an occlusion of the portal and arterial blood supply both, but only of the arterial.

It has been shown repeatedly that, in animals, the obstruction of the portal circulation will not produce infarction of the liver but rather, a decrease in size associated with some bluish discoloration and some congestion of the central areas. Cases are reported in which the portal vein has been obstructed for as long as

twenty years without marked changes in the liver, and with the development of collateral circulation.

The appearance of the liver following sudden occlusion of the portal vein is somewhat like that seen in hemorrhagic infarcts of the lung and Zahn called them "Atrophic red infarcts of the liver." This is, however, a misnomer for the findings are more that of a congestion than a true infarction.

Several writers have found that ligation of the hepatic artery is not always followed by infarction of the liver. Dayon and Dufert explained this lack of change in the liver on the grounds that the liver received an adequate blood supply from the other branches of the celiac axis. Von Haberer found that in all the dogs that did not develop infarction after ligation of the hepatic artery there were separate branches off the main trunk to each of the different lobes and that some of these were behind the ligature. Segall attributed this finding to anastomosis with the branches of the phrenic vessels at the diaphragm and with vessels from other of the surrounding viscera. From this Segall concluded that infarcts of the liver follow obliteration of those arteries which terminate in the liver without having any anastomosing branches and are therefore true endarteries.

A few cases are reported where the hepatic artery was ligated in the course of an operation and the patient recovered: One of these, by Smith, in which the hepatic artery was ligated because of injury to the vessel in the course of a gallbladder operation; another, by Kehr, in which the hepatic artery was ligated because of an aneurysm of the vessel which perforated into the gallbladder.

This case is interesting in that in this liver one-half shows infarction while the other does not and to both sides the portal circulation is occluded. The only portion showing the infarction is in that to which the hepatic artery is also ligated. That there is some anastomosis is borne out by the fact that beneath the capsule in some areas the necrosis is not so complete.

From the surgical point of view this case is interesting in that it demonstrates

one of the dangers connected with gall-bladder work. Here the work frequently is done with poor or difficult exposure and the chance of some type of anomaly of the ducts or vessels is always present.

In the literature cases are reported of the ligation of the hepatic artery, some with a fatal termination. However, they frequently recover though sometimes following a prolonged convalescence. From experimental evidence and also from cases reported, the ligation of the portal vein alone is not a fatal procedure, by any means, though sudden occlusion may cause some difficulty until collateral circulation has developed.

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COLLOID CARCINOMA OF THE BREAST—CASE REPORT

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A married woman, aged 42, for many years had frequently noticed diffuse swelling and lumps in both breasts, either before or after menstruating. She had never been pregnant. Her general health was excellent and she had gained forty pounds during the past year. A nodule in the left axilla, first noticed two months before our examination when it was the size of a pea, had enlarged to the size of a lemon; she ascribed this axillary enlargement to a recent furuncle of the face. For two weeks, however, there had been constant pain in the left axilla and upper arm, with increasing numbness and tingling of the skin of the left anterior and medial brachial regions. The pain was sufficient to keep her awake at night. Only three days before our examination, she had first felt a hard mass in the upper outer quadrant of the left breast.

Both breasts contained numerous firm discrete nodules typical of chronic cystic mastitis. Deep in the upper outer quadrant of the left breast was a freely movable mass, about 3 by 2 cm. not attached to the skin or underlying tissues and not even perceptible when palpated by the flat palm of the hand. The skin did not dimple over this mass. The nipple was not retracted, nor could any discharge be

expressed. In the anterior portion of the left axilla, just posterior to the anterior axillary fold, was another firm mass, about 4 by 4 cm. somewhat fixed toward the apex of the axilla. The physical examination was otherwise entirely negative. Results from examination of the urine and blood were normal.

After infiltration of solution of procain, the mass in the axilla was excised and found to consist of two encapsulated nodules, each 4 by 3 by 2.5 cm. These nodules contained a hemorrhagic mucoid material, with some spots of firmer tis-

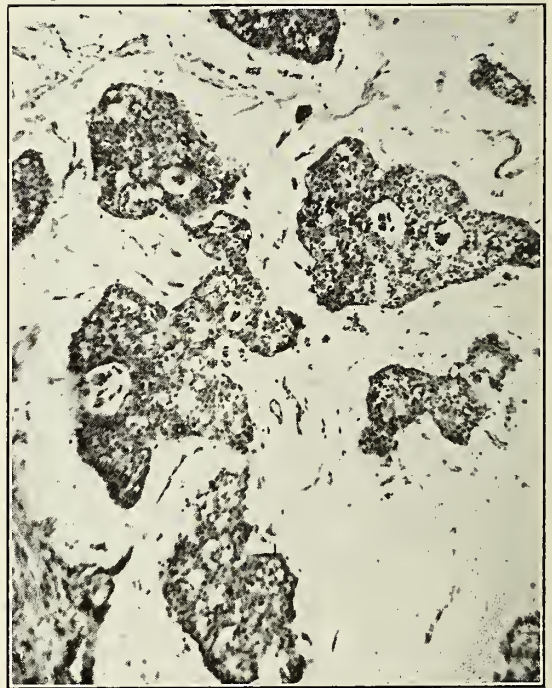


FIG. 1.

Metastatic mucoid or colloid adenocarcinoma, in an axillary lymph node.

sue. The diagnosis, made from study of fresh frozen sections stained with polychrome methylene blue, and from fixed sections cut in paraffin and stained with hematoxylin and eosin, was metastatic mucoid or colloid adenocarcinoma (Fig. 1.)

Four days later, using ether anesthesia, a radical amputation of the left breast was done, with removal of both pectoral muscles and excision of the contents of the axilla. None of the axillary lymph nodes removed at this second operation contained carcinomatous tissue.

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The mass in the upper outer quadrant of the breast was an atypical adenocarcinoma, chiefly made up of solid nests and



FIG. 2.

Atypical cellular adenocarcinoma of the breast.

clusters of malignant cells, but with sufficient fibrous tissue in other regions to suggest a scirrhus type of lesion (Fig. 2). Tendency to colloid deposit could not be found.

After convalescence, a course of therapy with roentgen rays was given, to be repeated after three months elapse.

COMMENT

Pain is unusual as an early symptom of carcinoma of the breast. Pressure upon sensory nerves by rapidly enlarging lymph nodes, distended chiefly by colloid material rather than by an overwhelming growth of new cells, gave this patient her first warning of the seriousness of her condition and caused her to consult a surgeon. It is our hope that this evidence of cell differentiation, so different in pathological character from the less differentiated primary tumor, increases her prospect of permanent cure.

TUBERCULOSIS OF THE SPLEEN SIMULATING BANTI'S DISEASE

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THOMAS G. ORR, M.D.*

A review of the literature reveals comparatively few instances in which the clinical similarity between tuberculosis of the spleen and Banti's disease is discussed.

Price and Jardine¹ reported three cases of primary tuberculosis of the spleen, resembling Banti's disease. The first case was a male, 41 years of age, complaining of generalized weakness and pain in upper left quadrant. The spleen and liver were found to be enlarged. The hemoglobin was 42 per cent and red blood cells 2,250,000. The temperature varied from 100.4 degrees to 101.6 degrees. A clinical diagnosis of Banti's disease was decided upon and splenectomy done. Patient died the day following operation. Microscopical sections of the spleen revealed a thickened capsule and throughout the pulp were myriads of miliary tubercles and various stages of tuberculosis. The second case was a white female, 41 years of age, who came to the hospital complaining of weakness and a mass in the upper abdomen. On physical examination patient had a large palpable, slightly tender mass in the upper left quadrant. Her hemoglobin was 60 per cent and her white blood count was 3,360,000. She had a daily afternoon temperature elevation of 100°. The preoperative diagnosis was Banti's disease. Splenectomy was done and at that time the liver and spleen both were found to be markedly enlarged. Patient had no fluid in her abdomen. She died on the third postoperative day. Microscopical sections of the spleen showed disseminating miliary tubercles scattered throughout the splenic pulp. There were also large areas of caseation surrounded by an avascular epitheloid zone. The third case was a white female, age 33, who entered the hospital, complaining of weakness, tumor in the abdomen and a loss of nine pounds of weight. On physical examination there was a large, freely movable mass in the upper left quadrant of the abdomen. The liver was not en-

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larged but there was moderate ascites. She had a 70 per cent hemoglobin and a red blood cell count of 4,420,000. The patient had a daily afternoon elevation of temperature from 100 degrees to 102 degrees. A clinical diagnosis of Banti's disease was made and the spleen was removed. The spleen was found to be markedly enlarged. There was also slight enlargement of the liver. Recovery was uneventful and she was dismissed from the hospital much improved. The spleen weighed 2,200 grams. Microscopic examination revealed a diffuse distribution of confluent tubercles.

Bunch² in 1931 reported a case of primary tuberculosis of the spleen in a woman 38 years old, complaining of weakness, vomiting of blood and passage of black, tarry stools. On admission to the hospital the temperature was 100 degrees. A clinical diagnosis was not made. On physical examination, she had a tender mass filling the upper left abdomen and extending one-half inch below the umbilicus. An exploratory laparotomy revealed the veins of the stomach from the pylorus to the cardia to be greatly dilated. The spleen was found to be markedly enlarged and was removed with difficulty, as it was bound to surrounding organs with dense adhesions. The liver in his case showed no abnormality. The blood picture was typical of secondary anemia. The spleen weighed 335 grams and the microscopic report revealed severe chronic perisplenic inflammation and typical calcified tubercles. In addition, a definite microscopic picture of Banti's disease was present. The patient was free from symptoms seven years after operation. This may have been a case of Banti's disease with a superimposed tuberculosis.

We have just recently treated a patient who had symptoms and findings characteristic of Banti's disease which proved at operation to be primary tuberculosis of the spleen.

Mrs. E., white female, housewife, aged 36, entered the University of Kansas Hospital on September 19, 1932, on the gynecological service, complaining of excessive menstrual flow, constant discomfort in her upper abdomen, weakness,

dizziness and a sensation of fullness in her pelvis. Her trouble started in 1917 while working in a rubber factory in Manchester, England, during the World War. The work consisted in vulcanizing rubber and in doing this type of work petrol is used. Her first symptoms were nausea and vomiting which gradually became so severe that she was compelled to discontinue her work. She grew pale and weak and lost considerable weight. Her family physician told her that she had a severe anemia. About four weeks after she quit work, she developed a "bearing down" sensation in her back and pelvis which was especially severe during menstruation. The anemia, weakness and pelvic pains have continued to the present time with varying degrees of intensity. Following childbirth in 1921, she developed bronchopneumonia which increased her anemia and pelvic pains. She gradually improved up to 1928 when her symptoms again became severe. Since 1928, she has had to confine herself to bed a day previous to the onset of menstruation and for one day following. Fifteen months ago she began having discomfort in the upper abdomen which was especially marked during menstruation. She received relief by lying on her abdomen.

PHYSICAL EXAMINATION

The patient was a well developed but poorly nourished white woman. Lips and mucous membranes showed a marked palor. No glandular adenopathy or scars detected. Chest expansion was normal and no evidence of a lung lesion found. A systolic murmur was heard at the apex and base of heart. The pulse range was 70 to 98 and the temperature varied from subnormal to 100 degrees. The blood pressure was normal. A mass was found in the upper left abdomen, extending downward $2\frac{1}{2}$ centimeters below the umbilicus and inward to 3 centimeters past the midline. The mass moved with respiration. The liver was palpable 3 centimeters below the costal margin. There was no tenderness. Pelvic examination revealed a small mass to the left of the uterus which was slightly tender.

LABORATORY DATA

Blood count on admission showed a red

cell count of 2,660,000, a hemoglobin of 25 per cent and a white cell count of 2,350. The blood chemistry, icteric index, Van den Bergh's and cholesterol tests were all normal. The Wassermann and Kahn tests were negative.

x-Ray report is as follows: "Radiographic examination of the chest, with the patient supine, shows an obliteration of the right costophrenic angle by old adhesions and a thickening of the pleura along the right chest wall, extending as high as the second interspace. No tuberculosis infiltration is noted."

A clinical diagnosis of Banti's disease was made. Several transfusions were given and 16 days after admission the spleen was removed. It was free of adhesions except along its posterior border. The liver showed slight scarring on the upper surface of the right lobe. Many adhesions were found in the pelvis, involving the tubes, ovaries and uterus in one mass. After a stormy postoperative course, lasting three weeks, she recovered sufficiently to return to her home.

PATHOLOGICAL REPORT

Gross Pathology—"Specimen consists of a spleen weighing 620 grams and measuring $19 \times 9 \times 7$ centimeters. The organ is of the usual shape, dark red-gray in color and soft in consistency. The capsule is smooth and is somewhat thickened and opaque. Histological Pathology—The capsule is thickened. The trabeculae are also more prominent than is usual. There is considerable diffuse fibrosis throughout the splenic pulp. The sinusoids stand out quite distinctly. In addition there are a number of rather large, granulomatous areas characterized by a central mass of caseation surrounded by typical tuberculous granulation tissue. Multinucleated giant cells are numerous. Some of the Malpighian bodies are rather large and show a tendency to hyaline change in the reticulum. The splenic pulp is in places quite cellular. A number of rather large, irregular, deep staining mononuclear leukocytes are seen scattered here and there. Diagnosis—Tuberculous splenitis (chronic)."

Since leaving the hospital several blood counts have been made, indicating that the improvement in the blood condi-

tion, while in the hospital, has been maintained. She still complains of "bearing down" sensation in the pelvis and pain in the lower abdomen. Menstrual bleeding has much improved.

DISCUSSION AND SUMMARY

Tuberculosis of the spleen in some instances resembles Banti's disease. The blood findings are not diagnostic. This has been very well illustrated by Winternitz³ who studied 51 cases of primary tuberculosis of the spleen. He has defined primary tuberculosis of the spleen as a tuberculous infection localized in the spleen after the original focus in some other part of the body has healed. In this series a normal blood count was recorded in 34 per cent, an anemia in 42 per cent and a polycythemia in 23 per cent. The cases here reported all showed a definite anemia.

Splenomegaly is characteristic of both Banti's disease and tuberculosis of the spleen and, therefore, not a distinguishing feature. The combination of a large liver and splenomegaly is more common in Banti's disease. Three of the cases above recorded had enlarged livers.

Ascites is found in the late stages of Banti's disease. It is noted as present in two of the five cases here described.

Fever is a differentiating factor between Banti's disease and tuberculous splenomegaly and is emphasized as an important point in the diagnosis. Fever is seldom noted in Banti's disease except in the terminal stages. All cases here reported showed slight fever.

Gastric and mucous membrane hemorrhages are commonly found in Banti's disease. Four of our five cases had no such symptoms. Bunch's patient probably had both Banti's disease and tuberculosis of the spleen which would account for the bleeding described.

A family history and evidence of tuberculosis elsewhere in the body are of diagnostic importance. The tuberculin test is of doubtful value.

The recognized treatment of both Banti's disease and primary splenic tuberculosis is early splenectomy.

The percentage of recoveries following splenectomy for primary tuberculosis of the spleen has been noted by Magnac.⁴

In a series of 18 cases treated by splenectomy, he records 67 per cent recoveries. Three of the five cases included in this report recovered from the operation. Our patient is living with much improved health six months after splenectomy.

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SPEECH DEFECTS

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People formerly thought of speech defects as inborn, and accepted them as handicaps which had to be put up with. In the last century various surgical operations about the mouth and throat were used, but most of them failed to do any good. In recent years the problem has come to be understood better, and sufferers from defective speech are applying for treatment in greater numbers, in confidence that something can be done to help them. The confidence is not entirely baseless, for results are better now than at any previous time.

Treatment is largely in the hands of two groups: first, a highly trained body of experts in speech correction, and second, physicians who are interested especially in mental hygiene and psychiatry. The psychiatrists are involved because many speech defects are of mental or emotional origin. To treat the original factors alone is not sufficient, because the defect is perpetuated by habit, and usually the cure must be completed by the specialist in speech correction, who understands sound-production and is skilled in methods of teaching. It is not necessary to use both physicians and speech-correctionist in every case, because the latter should be trained also in the basic facts of mental hygiene.

Speech defects are of such great concern in the schools, that in many cities departments of speech-correction have been established. Kansas City has one of the best.

Serious speech defects are found in about one per cent of the entire popula-

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tion. In school, children so afflicted tend to grade below their real ability because they are unable to express themselves fully, or shrink from displaying their infirmity by reciting. In later life speech defects are always an obstacle to free social intercourse and to advancement in almost any career. Even more unfortunate is the effect upon one's personality. Self consciousness about speech leads to self-consciousness about everything, and tends to isolation and even to various nervous and mental disabilities.

Speech is not a birthright. It has to be learned, and one has to use organs in speaking which are primarily designed for other purposes. Even the vocal cords are most important in preserving life by protecting the wind-pipe from foreign bodies. It is quite a secondary matter that we are able to produce noises by allowing the free edges of the cords to vibrate. Speech is thus an accomplishment and liable to more defects than a function like walking which is laid down from the beginning in the nervous system. A second general fact is that sounds are uttered first in infancy as a protest against discomfort, as a demand for something which will give pleasure, or as an expression of contentment. In this way speech develops first as an expression of emotion, and remains throughout life closely bound up with emotional states. A third factor which is involved in every case of speech defect is habit. It is a primary property of the nervous system that an event occurs a second time more easily than at first, and with repetition the event becomes automatic and difficult to vary. This is why treatment should begin in childhood, before faulty habits of speech are confirmed.

One of the many classifications of speech defects is into three types: (1) Delay in beginning to speak; (2) Defects in sounds, and (3) Stuttering.

DELAYED SPEECH

A child should be speaking freely by two and one-half, or at the latest three years. If he does not, he may be mentally backward, and this should be investigated. A rarer cause is a vaguely understood lack of facility in language

without other mental defect. Some people have a natural readiness in language, and easily learn several foreign tongues in addition to their own. Other perfectly normal people lack this facility and may have difficulty in learning their own language properly. In extreme cases this may lead to delayed and awkward speech. I know an intelligent young man without other defects, who can express only simple ideas in words, but can convey a complex idea clearly and quickly by diagrams and sketches.

The most important variety of delayed speech, because the easiest treated is the type due to over-indulgence. If a child is denied nothing, if every want is filled and every discomfort prevented, there is no particular reason why he should learn to speak. Or if crying is sufficient to bring results at once, there is no reason why a child should learn to specify his wants in words.

DEFECTS IN SOUNDS

Defects in sounds may affect only one or two sounds or may be so severe that the language is unintelligible. There are many causes for such defects. There may be imperfections in the teeth, or in the nerves or muscles of the tongue, lips and throat. Cleft palate produces a special variety of defect, and is almost the only one of the serious structural defects which can be treated surgically. Operation may remove the cleft in the palate, but does not cure the speech defect, because this has become habitual and must be removed by special training. This necessity should never arise, because every cleft palate should be treated in the first month of life. Tongue-tie is almost a myth, and the freeing of the tongue which many parents insist upon is almost always unnecessary. At the National Hospital for Speech Disorders in New York there have been only two instances of tongue-tie in the thousands treated there. Do not expect to cure serious speech defects by having tonsils or adenoids removed, although such operations may improve the tone of the voice.

Other causes for defect in sound are impaired hearing; naturally poor discrimination of sounds though hearing may be good; use of foreign language at

home; imitation; poor training, and many others.

Treatment of this variety of defect is by speech-training, preferably by a trained teacher, but when such care is not procurable any intelligent mother can accomplish a good deal by a little study of how sounds are produced. She may find out how the faulty sounds should be produced by watching her own mouth and tongue in a mirror. As a rule mothers are not as good teachers of their own children as are strangers. In most cases it is best to consult a physician first so that physical and emotional factors may be found and eliminated.

STUTTERING

In stuttering, utterance may be entirely blocked or initial or other syllables may be repeated with great tension. The stutterer may be thrown into extraordinary contortions in getting the sound out, but when once spoken the sound is usually correct.

Stuttering is rather a nervous disorder than a primary speech defect. Almost everybody is likely to stutter when under emotional tension, but most of us do not acquire the habit of doing so. After the habit is well established it is very obstinate and adults usually require the aid of both physician and speech trainer. It is usually curable. Albert Bigelow Paine, the writer, was relieved of stuttering in late middle life and became a pleasing speaker after nearly a life time of silence when in public.

The time to treat stuttering is when it first appears, in childhood, and one important part of the treatment is to ignore the stuttering entirely. As soon as the stutterers' attention is drawn to it by correction, scolding or ridicule, he becomes self-conscious and the habit is very quickly fixed. It is like making an effort to go to sleep; the more effort the less sleep.

The important thing is to try to find out why the child is under emotional tension, and to remove the cause. Some of the situations one finds seem to be too simple and childish to have such effects, until one reflects that in children they could hardly be anything else.

THE EARLY AND LATE TREATMENT OF BURNS

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Several recent contributions to our knowledge of handling burns and scalds has increased the efficiency of the early treatment; decreased the mortality; shortened the period of convalescence and given expectation of the prevention of ultimate contractural deformity. My excuse for outlining a rational program of the handling of the burned individual is that on the whole he does not receive the care from inception to final repair that is most likely to give the minimum of pain, the least mortality, the least permanent disability and deformity, and the minimum time in gaining a cosmetic and functional repair.

Without in any way minimizing the importance of the care of the local lesion of the acute burn, it can be said with some truth that in the recent past possibly too much attention has been focused upon the local lesion in contra-distinction to the alleviation of the early profound systemic disturbances. Until very recently the profession has looked very favorably upon the conception that disintegrated protein products were liberated at the site of the local lesion, and were then absorbed into the general circulation to cause the profound symptoms of vasomotor disturbance which is a part of the clinical picture.

The treatment of the systemic disturbances in the acutely burned, starts with the adequate alleviation of the most outstanding symptom—pain; but no discussion here is necessary as it is universally agreed that morphine and codein in amounts to give relief are indicated. To gain a more rational conception of the other systemic measures calculated to decrease mortality, it is necessary to discuss briefly the disturbed physiology encountered.

The immediate shock which we see clinically in the acutely burned is not caused in animal experiments as the animals are anesthetized. One must deduce that the primary shock is due to pain and fear induced by the injury and

is caused by a reflex temporary dilatation of the vascular bed and is not due to an actual reduction in the volume of blood—only to a relative reduction, so to speak. However, within an hour or so as Underhill et al. have shown, symptoms which may be ascribed to a true secondary shock supervene and are due to an actual reduction of the quantity of blood in the circulatory tree too great to be compensated for by a compensatory vascular constriction. The vascular permeability is increased in the outgoing direction. Fluid is lost into the intercellular spaces in the vicinity of the burn in abnormally large amounts and there is no tendency to reabsorption into the blood stream until after the first 24 to 48 hours, after which there is a tendency for reabsorption. Chemical analysis of this fluid shows it is practically identical with that of the blood serum.

These investigators have also shown that in experimental animals with a burn involving one-sixth of the surface of the skin, there may be a fluid loss from the circulatory tree to the extent of 70 per cent of the total blood volume in a period of less than 24 hours. Thus, in a 150 pound man with a 5000 cc. blood volume, 3500 cc. of fluid could be lost within 24 hours. Underhill et al. conclude that man or animal do not long survive when the blood plasma is concentrated to 140 per cent of the normal value. The blood cells are concentrated as the blood plasma pours out so that an estimation of the hemoglobin content and red cell count of the blood if taken from the same place gives a good rough index of the extent of the blood concentration. Another finding was a decrease in the blood chlorides after about 36 per cent of the reserve body chlorides have been used.

The loss of blood plasma with its protein content from the circulatory tree, the relative increase of the blood cells combine to cause a slowing of the capillary blood flow and an insufficient oxygen supply to the outlying tissue intervenes due to the circulatory deficiency. In the face of a concentrated blood, the kidneys fail to separate a normal urine and there occurs an elevation of the non-protein nitrogen of the blood

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and an associated albuminuria of the urine.

Blalock working on the reason for the fall in blood volume and pressure in the shock syndrome, found by very carefully weighing dogs, split in half by a special technique which should be accurate, that the burned half of the animal increased in weight by 3.34 per cent of the body weight and that 48 per cent of the total blood plasma escaped from the blood stream on an average.

Underhill in studying the loss of fluids—a fluid similar to blood plasma in composition—from the lungs following lethal war gas poisoning found that a 25 per cent concentration of the blood plasma in the circulatory tree caused grave symptoms and 40 per cent usually caused death. Thus, the average of 48 per cent loss of blood plasma in Blalock's experiments would seem to be sufficient to cause death. In Blalock's experiments dogs were used. They do not blister when burned. In the human who blisters, the loss of blood plasma might very well be even greater. Also in Underhill's experiments, he found that the fluid loss tended to vary directly with the degree of the burn but finally a maximum response to fluid loss was reached. The conclusions arrived at experimentally coincided with what we know clinically, that the area burned is far more important than the degree of the burn.

Thus, the experiments of Underhill and Blalock would lead one to believe that it is not necessary to fall back on the absorption of an autolytic protein toxin to explain the clinical phenomena that follow a severe burn. The failure of phenylsulphophthalein injections and strychnine injections in lethal doses to show signs of absorption, would suggest that the tendency for absorption of any toxin into the circulation is during the first 48 hours, at least, practically nil.

If the preceding data is correct, it would seem logical during the first 24 to 36 hours—while the increased permeability of the capillaries in the vicinity of the burn persists—to give continuous fluids. The next pertinent questions are: What are the fluids to be and in what amounts are they to be given?

Because of the reduction of the serum protein content of the blood stream and because such a reduction in itself may play a major part in the death of the patient, even in the face of the known hemoconcentration seen in burned cases, it would seem imperative to raise the serum protein by blood transfusion. When the burn is a severe one during the first 36 hours, a 25 per cent reduction in the serum protein in a 150 pound adult with 5000 cc. blood volume would call for about 1250 cc. of blood by two ordinary blood transfusions of about 600 cc. each. For a child a proportionate reduction according to weight would meet the indications.

As the primary shock is a relative loss of blood volume from general vascular dilatation, it is logical that the initial injection should be intravenous and fairly rapid. When the vascular bed has regained some of its tone, an excess of fluid is necessary to aid in replacing the fluid which will be lost through increased vascular permeability in the neighborhood of the burned area. In an adult the work of Smith and Mendel and Rountree on "water intoxication" would lead one to run the initial intake of isotonic salt solution to 4000 to 5000 cc. Rountree found 35 liters of saline necessary to produce water intoxication in man and Smith and Mendel gave rapid isotonic salt solution in quantities equal to the animal's blood volume. Within 5 minutes the fluid disappeared from the blood stream and later was eliminated through the kidneys. In a child the initial quantity of salt solution should be decreased in proportion to the body weight. After the initial intravenous intake of salt solution, the needle should be left in the vein and continuous salt solution kept up not faster than 25 cc. per minute in a sufficient amount to keep the blood volume and red cell count as near normal as possible. In an adult, certainly four to eight liters per 24 hours will be required in a moderate degree burn. As the hemoglobin and red blood cell count give one a fair estimate of the hemoconcentration as the salt solution is given, both should be checked repeatedly and kept within normal limits. A fair index of the

progress of the shock is thus given to one. Isotonic salt solution or Hartman's balanced solution should be used—no matter what the quantity—until the hemo-concentration returns to normal and it should be maintained at this level until the loss of fluid to the subcutaneous tissue planes ceases.

Isotonic salt or Hartman's balanced solution is recommended as it does not particularly disturb the acid-base balance and the electronic concentration of the blood glucose is ordinarily not necessary except in children when there is a starvation element. If sufficient glucose solution were given to meet the shock indications, a hyperglycemia might result and some of the water should have to be utilized to excrete the excess of sugar. However, if an acidosis from starvation in a child seems to be present, sufficient of a 5 per cent glucose solution which is isotonic with the blood should be used to alleviate the symptoms.

In regard to the early local treatment it has come to be quite generally recognized that the fixation method has advantages. A solution with a dessicating or a fixing action is sprayed or painted on the burned area or a dressing continuously moistened is applied. Among the drugs that have been used are absolute alcohol which, although expensive, gives remarkably good results; aluminum acetate, picric acid, and the tannic acid of the Davidson technique. Although we doubt that the original conception of Davidson and others holds in that the symptoms of an acute burn are due to the absorption of disintegrated protein toxin. It seems that most of the series of cases published do show a decreased mortality rate with the tannic acid fixation technique of Davidson, Wilson, Beekman, Rogers, and Bancroft all report about a 50 per cent mortality decrease if they interpret their statistics correctly. This record cannot be overlooked.

During the first 24 hour period no great reduction in mortality is shown. No treatment saves those too badly burned—50 to 90 per cent of the body surface. During the second 24 hours, the method shows a considerable reduction in mortality and there is a reduction in

mortality of later deaths in the period of infections and septic complications. It is possible that a better knowledge of the factors influencing systemic collapse may have something to do with decreased mortality. The strong arguments for the fixation method is the evidence of the patient's comfort and the fact that the method is simple and tends to early cleanliness of the burnt tissue. At least for the first week or ten days, the patient needs little attention so far as the local wounds are concerned. It is doubtful if the enthusiasm expressed in favor of more rapid epithelialization with the tannic acid method was justifiable. It is true that if the basic layer of skin has not been killed when the coagulum separates, complete epithelialization may seem to be present at the end of two weeks but this occurs in any method of treatment. The method is practical and economical. The fresh tannic acid solution can be made up from one-half teaspoon of tannic acid to one ounce of water.

Probably for the local treatment all in all, the tannic acid fixation method is the most efficient during the early period of burns. That is, during the stages before the slough tends to separate from the granulating base which forms beneath the dried fixed crust. The method originated by Davidson has been modified slightly in the following description: The skin surrounding the burned area is cleaned with benzine and from the burnt area gross dirt is removed with instruments. Five per cent tannic acid (in a freshly prepared solution) is then sprayed over the wound. The child is placed on a sterile sheet without clothing. Blankets are placed to form a tent over the bed. Two or three electric light bulbs are suspended from the top of the tent for light and for warmth. Every half hour the wound is sprayed with tannic acid. No dressings are applied. After about an hour, the pain mostly ceases. In from 15 to 24 hours depending upon the depth of the burn, a dry brown heavy insensitive crust forms over the wound. Whether or not any surface applications in deep burns reach the lowermost layers is questionable, to say the least. In from

three to four days in most cases, the evidence of toxemia tends to subside. In areas superficially burned, after about one week the crust begins to loosen and epithelialization starts. In areas burned more deeply in from two to three weeks, a line of demarcation forms between the dead and live tissues. At this time a roller gauze bandage is wrapped about the area and kept continuously saturated with saline, or when pain on dressing is pronounced the child is placed in a tub bath of saline for two or three hours daily and then placed under the electric lights. When evidence of infection appears beneath the crust, holes are made in it and one or the other of the types of wet dressings just described are started. Wet dressings and soaks serve to give and control drainage and also hasten the separation of the dried fixed slough from the underlying granulation tissue bed."

Recently Blair and Brown even from the inception of the burn have advocated treating a burn like any other wound by continuous saturated hypertonic saline wet dressings or tub soaks in hypertonic saline with dry heat alternated to meet the indication. They state that "in any but superficial injuries real success will not depend on the use of this or that drug or dressing, the nominal adaptation of this or that plan or one treatment no matter how perfect its inception or its execution but in the intelligent forceful persistent carrying out of an adequate program." An anemia is likely to develop which retards the fighting forces of the surrounding tissue during the time of separation of dead from live tissue. This is best combated with an occasional blood transfusion as indicated. Later when the time for a skin grafting has arrived, the patient will not then be anemic and there will be less likelihood of infection destroying the graft or the underlying tissue showing too little reactive qualities for the graft to quickly "take."

When nature begins to loosen and separate the dead tissue from the live tissue, the final stage is at hand—the early cosmetic and functional repair with the prevention of permanent deformity from cicatricial contractures. To prepare the granulating base for the application of

skin grafts the continuously wet roller gauze dressing possibly alternated with the tub soaks are continued. Crusts and scabs loosen, the slough separates and the underlying base of granulation is stimulated to healthy growth and made as near sterile as possible. When no serious complications set in and an anemia is not allowed to supervene, by the end of four or five weeks at the most all damaged tissue is spontaneously thrown off except exposed tendons and bone. A firm scar bed supporting healthy granulations has now formed.

One aims to keep the wound relatively clean. To make the patient as comfortable as possible, allow him to move as actively as possible, to prevent the tendency to secondary contracture. To support the patient's general condition and to repair the surface as early as possible before the new scar becomes heavy scar and has too great a tendency to contracture. Splints are seldom necessary. The amount of contracture depends upon the anatomical region and the amount of destruction of tissue. A splint will not prevent a hard scar from eventually contracting on the flexor or extensor surface of a joint. The prevention of contracture is due to the recognition of the amount of surface tissue loss and its adequate replacement. Large grafts of the Thiersch or so-called split type are used to cover the granulating surface when the time for skin grafting is deemed to have arrived. One can either slice off the granulations and apply a large graft to the yellow scar base or apply the graft directly to the granulation tissue bed. The latter is simpler when there is little tendency to contracture.

The proper after care of the thin graft is important. We have found that the application of a roller gauze saturated in saline over the graft holds it firmly from slipping. The gauze roll is kept wet continuously either by pouring saline on the gauze or by periodically placing the child—dressings and all—in a tub bath of saline. This gauze dressing is not removed for five days. One need not worry about inadequate drainage or de-

veloping infection of the graft if the gauze is kept wet at all times.

We believe that immediate debridements are illogical before the line of demarcation has formed between live and dead tissue as in other surgical conditions. It is not always possible at first to distinguish between partial and complete destruction of skin. When any of the epithelial elements have been spared, there will be spontaneous healing with a serviceable skin although the skin may be red and thick for a long time or may eventually become glazed. This spontaneous healing of partially damaged skin accounts for the healing of many burns under any plan of treatment followed with very little scarring which at first appeared fairly deep.

Early a healed scarred surface has a decreased resistance to any trauma or to lower tone of the patient; it tends to dryness and keratosis—probably due to lack of normal skin gland secretion—but eventually the resistance of such a surface increases and the deep part of the skin softens and becomes more pliable.

When one awaits spontaneous epithelialization of the whole surface of a burn near the flexor or extensor surface as the case may be of a joint, depending upon the amount of surface tissue loss, serious contracture and fixation of the joint or joints, or even distortion of bone in a growing child—is the usual result.

As mentioned previously usually thick split grafts are used in preference to the full thickness grafts—especially when unhealed surfaces are present because of the greater assurance of their “take” and the shorter time necessary for healing.

In healed deformities, the extent of the original loss is estimated after complete relaxation of the contracture is given by cross-cutting and excising binding scars. The full thickness skin graft often has advantages in healed contractures as in these cases under proper conditions the “take” is almost as certain as that of the split graft, the contracture after healing is less and the resultant cosmetic result—if such is deemed important—may more nearly resemble that of the normal skin.

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UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Pus in the Urine*

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This paper has been prepared for the purpose of reviewing and re-emphasizing one of the cardinal findings which if neglected often proves a great hazard to health.

The importance placed upon pus in the urine by life insurance companies; the increasing interest of laymen in periodic health examinations and benefits which result from finding the source of pus in the urine, are among the factors which should keep this subject fresh in the mind of every physician.

Five to seven pus cells per high power field¹ is quite generally conceded to be the upper acceptable limits. Ockerblad⁴ advocates a more accurate method for reporting the pus cell count i.e. Fuchs-Rosenthal spinal fluid counting chamber, and the number reported in cells per cubic centimeter. Either standard has a definite place in diagnostic measures.

Finding pus in the urine is not a difficult task, yet routine urine examination is not to be minimized in favor of some gross lesion which may be only co-existent with the real cause of the pyuria.

Pus in the urine may arise from any part of the genito-urinary system, that is from kidney cortex to urethral meatus. The etiology depends of course,

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upon the location and character of the inflammatory or infective process. All cloudy urine does not contain an excessive number of pus cells; simple laboratory tests often prove the presence of urates, phosphates, bacteria, or chyle.

Pyuria cases may be divided clinically into two groups: Those with objective findings and localizing symptoms, and those without local findings.

The cause of pus in the urine in many cases is very difficult to find. It may be necessary to examine a number of single or 24 hour specimens before a clue is found.

The urologist equipped as he is for a complete study of the urinary tract should be consulted early. He should be willing to cooperate with the family physician, and together much time and suffering should be saved the patient.

Too often I believe the case is treated until the patient shows discouragement, then the urologist is urged to make a complete study at one sitting; give all the sources of infection and perpetrate an early cure. This is not fair to the patient as repeated examinations often reveal.

I wish to outline briefly eight common sources of pus in the urine:

1. A constricted urethral meatus may easily prolong an urinary infection.

2. Periurethral glands once infected may constantly supply pus to the urine.

3. Strictures of the urethra may easily produce obstruction and prolong an inflammatory reaction of the urethra.

4. Prostatitis, seminal vesiculitis; or perhaps more correctly a prosto-vesiculitis in the male is a very common and often neglected source of urinary infection. Many such cases are slow about showing localizing signs and are quite often discovered only in the thorough searches for a focus of infection which might account for recurrent myalgias, neuritis or rheumatism attacks.

5. Acute urethritis, specific or non-specific we need only mention since it usually is an obvious factor; not so, however, with the old chronic urethritis which may be tolerated with little or no localizing symptoms.

6. Trigonitis and cystitis are most always accompanied by varying degrees of localizing symptoms and likewise yield varying quantities of pus to the urine.

If the infection is located in the bladder then certain questions must be answered. Is obstruction a causative factor? If so, where is the obstruction? Is it a urethral stricture associated with a bulbous urethral infection? Is it a median bar or an adenoma of the glands of Albarron or is it an obstruction produced by a hypertrophied prostate, perhaps including calculi? Then too, lesions of the nervous system producing spastic conditions of the vesical neck and loss of bladder tone must be thought about.

Other sources of infection may be vesical tumors, ulcers, diverticuli, fistula, stones, foreign bodies or infected blood clots.

Careful examination having failed to prove any of the former causes, there are still left the upper urinary tract sources.

7. The ureter furnishes a location in which much infection may develop. In studying the problem in this field one must examine for strictures, stones and tumors. The obstruction may be of an acute inflammatory type produced by trauma, adjacent to an infected appendix; tubo-ovarian abscess or a diverticulitis of the colon. The inflammatory reaction accompanying pyelitis attacks and renal tuberculosis may produce obstruction. Then too we have the obstructions resulting from ptosis of the kidney with a fixed ureter by adhesions or an aberrant blood vessel, or a torsion and kinking to produce obstruction and the resultant infection.

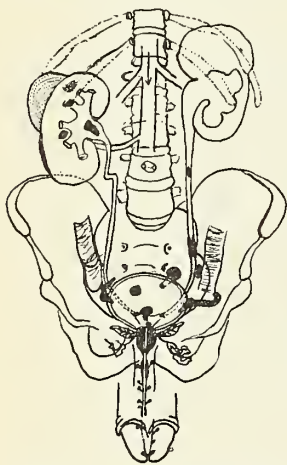
8. Lastly the kidney itself is the upper urinary source of infection and it may in turn be affected as a result of any of the foregoing causes of pus in the urine. Pyelitis or perhaps more correctly pyelonephritis may supply many pus cells to the urine. The pyelonephritis may be caused by any one of a number of bacterial organisms which may invade the kidney; also colon bacilli, tuberculosis bacilli, staphylococcus

or streptococcus organisms. Lesions such as renal calculi, tumors of the pelvis, tuberculosis, infected hydronephrosis, hypernephromas or renal abscesses may load the urine with pus.

Pus may easily be found in the urine.

It is not always so easy when we try to determine the cause. For instance, 15 per cent of the stones¹ will not cast shadows, nor do all the stones produce symptoms, and if they do, the symptoms may definitely be located on the opposite side from the site of the stone.

Tuberculosis presents unusually difficult problems. Sixty-five per cent of such cases may persist as chronic cystitis in spite of ordinary treatments. In 10 per cent of the renal tuberculosis cases we find a symptomless pyuria¹. For perhaps two or three years about 90 per cent of the renal tuberculosis cases will remain confined to one kidney. It should not be necessary here to emphasize the importance of early diagnosis and removal of the kidney affected.



Many of the common causes of pus in the urine have been enumerated and the accompanying diagram shows graphically the locations of such causes. There may be, of course, a combination of two or more of these lesions.

It is recognized there are many

acute intra-abdominal extra urinary cases. It is also recognized that acute abdominal cases have been hurriedly operated and intra-urinary symptoms persist post operatively. Such results might be avoided in all fairness to the patient.

The urologist recognizes that the urinary tract is not the only important system in the body, and freely admits the importance of the family doctor and all the other specialists in dealing with the human system. We as urologists, feel

charged with certain responsibilities concerning this system that has to do with the disposal of end products, reproduction and regeneration.

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TUBERCULOSIS ABSTRACTS

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The outcome of any tuberculous infection depends upon the resistance offered by the body. Whatever subtracts from the patient's physiological resources presumably hinders recovery. Concurrent disease of any kind places a handicap on the tuberculous patient. Syphilis is widely prevalent, tends to be chronic, is often undiscovered, and frequently masquerades as something else. To what extent does syphilis complicate tuberculosis? Oscar Orszagh of Budapest summarizes in "Tubercle" of January 1933, certain statistics, conclusions and implications bearing on the coexistence of tuberculosis and syphilis. The following abstract of his article was prepared by the American Social Hygiene Association.

Pulmonary Tuberculosis and Syphilis

Deaths from syphilis rank high: in England 10 per cent, in France 16 per cent, in the United States 17 per cent, of the total mortality can be traced to syphilis. On the other hand a study of a group of luetic patients in Germany indicated that 26.67 per cent of them died of tuberculosis against 22.5 per cent dying of syphilis. Similarly, in Finland of 734 syphilitic patients, 25 per cent died of tuberculosis while only 15 per

cent died of syphilis. Post-mortem examinations of 500 cases of syphilis showed that the cause of death was tuberculosis in 10.6 per cent of cases. These and other statistical studies and clinical observations indicate that syphilis hastens the progress of tuberculosis.

Because of the frequent coexistence of tuberculosis and syphilis, it is important that a careful search be made in tuberculous patients for evidences of syphilis. This search should include as an important feature, a careful history with repeated questions on subjects which might bring syphilis to light, as for example, history of primary sore, rashes, miscarriages and family histories. At the Queen Elizabeth Sanatorium in Budapest, only 1.7 per cent of the tuberculous patients having syphilis gave a clear history of this disease, while the total number found to have syphilis on the basis of history, and serological and clinical examinations was 9.3 per cent of all the patients in the sanatorium. It is desirable to examine the blood of the tuberculous patient routinely at least once and preferably oftener and to employ two tests as for example the Wassermann and one of the precipitation tests, bearing in mind always that the blood test may be negative even in the presence of syphilis. Orszagh does not think it necessary to examine the spinal fluid in the majority of cases, a judgment with which the reviewer does not fully agree.

SIMILARITY OF SYMPTOMS AND LESIONS

A good many luetic conditions are mistakable for tuberculosis. Thus, there may be general systemic manifestation in early syphilis such as loss of appetite, paleness, raised temperature, headache, chest pains, gastric disturbances and jaundice, symptoms which resemble those of tuberculosis. In the secondary stage of syphilis patients may suffer from bronchitis and sore throat. Usually the lymphatic nodes are enlarged especially those of the groin and neck, and enlarged hilar lymph nodes are not rare in syphilis. Chronic syphilitic skin lesions and chronic syphilitic laryngitis are occasionally mistaken for tuberculosis. Pulmonary syphilis can cause alterations of lung tissue quite similar to those of tu-

berculosis. Disseminated gummata may resemble miliary tuberculosis, ulcerated gummata may resemble cavitation of tuberculosis. Histologically the lesion of pulmonary tuberculosis and of pulmonary syphilis may be indistinguishable. It is to be borne in mind that the two diseases may be present in the lung at the same time.

Simple pulmonary syphilis does not occur so often as the clinicians and roentgenologists diagnose it. Neither is it so rare as the pathologists at present take it to be. The diagnostic difficulties are to be overcome only by exact systematic clinical, serological and x-ray examinations. Special significance is attributable to negative sputum, positive Wassermann, characteristic history and the good effects of anti-luetic treatment in arriving at a working diagnosis of pulmonary syphilis.

SYPHILIS DELAYS CURE OF TUBERCULOSIS

Tuberculosis at the Queen Elizabeth Sanatorium gave in general a graver prognosis in the presence of syphilis. The longer the intervening period between the outbreak of the two diseases, the less harmfully does lues influence the course of tuberculosis. In judging the effect of syphilis on tuberculosis, it is important to know what the condition of the lung was when syphilis was acquired and whether it has become worse. If the pulmonary lesions are old and healed, or if the patient is in good condition, syphilis as a rule does not affect this condition. But in the case of badly nourished old persons with little capacity for reaction, syphilis can attack the system to such an extent that the latent tuberculosis may be reactivated and become fatal.

In the same way, aggravation may follow fresh luetic infection in the case of persons whose lung trouble was extensive, but which had only showed slow progress till then. If a person suffering from active tuberculosis acquires fresh luetic infection, and his bodily resistance is weak, then the illness may have a very serious course, though it is also possible that the disease may later calm down and the prognosis become more favorable. Persons suffering from antecedent

lues may react to fresh pulmonary tuberculosis infection just as healthy persons would. Tuberculosis becomes fatal only if the lues causes lesions which disturb the working and vitality of the whole body, as for example cardiovascular lesions.

TREAT SYPHILIS WITH DISCRIMINATION

In the case of pulmonary syphilis the treatment of syphilis should be energetic. In the case of pulmonary tuberculosis complicated by syphilis, the treatment of syphilis should be cautious. In the choice of correct doses, the patient's general condition and the character of the pulmonary lesions are extremely important factors. With a weakened constitution, and active recent and exudative tuberculosis, the treatment of syphilis should be delayed until the general tuberculous condition has improved and it should then begin with small doses of bismuth. In the presence of fibrous pulmonary lesions syphilis may be treated safely with larger doses of bismuth, and neoarsphenamine may be used in moderate doses beginning with .15 grams and going up to .45 grams. Surgical treatment of tuberculosis is not barred by the presence of syphilis provided anti-luetic treatment is administered.

Pulmonary Tuberculosis and Syphilis, Oscar Orszagh, Tubercle, Jan., 1933.

Tuberculosis and Syphilis Compared

TUBERCULOSIS

Essential lesion	Tubercle
Essential pathology	Destruction of tissue
Prevalence	About .7% of population (active cases)
Diagnostic criteria	History, symptoms, physical signs, tuberculin test, x-ray, discovery of organism
Prognosis	Good with early treatment
Treatment	General: rest, nutrition, hygiene, collapse

SYPHILIS

Gumma
Replacement of active with inactive tissue
About 5 per cent of population
History, physical signs, blood test, x-ray, discovery of organism
Good with early treatment
Specific: arsenicals, bismuth, mercury

THE PHYSICIAN'S LIBRARY

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 13, No. 1. (Pacific Coast Surgical Association Number—February 1933) 247 pages with 90 illustrations. Per Clinic Year (February 1933 to December 1933). Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The Clinics in this volume have been contributed by Fellows of the Pacific Coast Surgical Association and they are of the usual high standard of previous volumes.

Dr. L. Eloesser brings out some valuable points in his clinic on "Sites and Types of Amputation and Exarticulation Together with Some Notes on Technic."

Dr. Fred R. Fairchild states the age factor should be more seriously considered in a decision for conservatism on the part of the surgeon. He further brings out the fact that in their cases of acute appendicitis with general peritonitis, their mortality rate has been decidedly lowered since changing their operative technic of approach to the appendix by the muscle splitting incision far to the right rather than the right rectus incision.

Dr. J. Tate Mason and Joel W. Baker describe a modified technic of choledochoduodenostomy that may at times simplify this operation.

Many other instructive clinics are also given in this volume.—M.B.M.

THE PRACTICAL MEDICINE SERIES—GENERAL THERAPEUTICS—Edited by Bernard Fantus, M.S., M.D., Professor of Therapeutics, University of Illinois College of Medicine, member Revision Committee, United States Pharmacopeia and of National Formulary Revision Committee and Louis B. Kartoon, B.S., M.D., Instructor of Medicine, University of Illinois College of Medicine. The Year Book Publishers, Inc., Chicago. Price \$2.25.

This handy volume epitomizes the advances which have been made throughout the world in that comprehensive and all-important branch of medical science called therapeutics. Current medical literature has been diligently explored, and wherever any contribution to the subject in hand has been found it has been abstracted for this book. The skill with which this condensation of material has been done is very striking. Every

(Continued on Page 200)

THE JOURNAL

of the

Kansas Medical Society

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EDITORIAL

COSTS OF MEDICAL CARE

The most important book published in the past year for the physician is the one offered by the University of Chicago Press entitled "Medical Care for the American People." Its cost is only \$1.50 a copy. It includes a summary of the final report of the national Committee on the Costs of Medical Care, and discusses both the minority and majority reports. It is filled with factual data dealing with problems of medical practice that may have considerable influence upon it in the next ten years.

The report shows that the total health bill for this country for 1929 was three and one-half billion dollars, or thirty dollars per capita. This represents the entire cost of doctors' fees, hospital services, dentists' charges, nurses' care, and

so on. It is not high when one considers that the people of this country spent almost twice this much for tobacco, toilet articles and recreation. Thirty per cent of the cost of this medical service goes to physicians in practice; 24 per cent to hospitals and 18 per cent for drugs alone. It also gives the information that three hundred and sixty millions were spent for patent medicines and one hundred and twenty-five millions were given to various medical cults. It also shows that the public spends more money for drugs and medicine than the entire cost of maintenance of all hospitals in the country. Yet one hears nothing about the high cost of drugs. The report indicates that the complaints on the cost of medical care are due to the unorganized distribution of the services and their unpredictable character. The average cost of medical care based on an analysis of numerous local experiments with organized methods of distribution of all adequate medical service shows the cost to each person per year to be twenty to forty dollars per annum, depending on the locality and the completeness of these services.

The report calls attention to several striking anomalous situations existing in the present management of the health needs of the country. Many diseases are increasing, such as cancer and heart disease, in spite of the fact that medical science has made more progress in the past fifty years than in all previous history. There seems to be an increasing lag between scientific advances and their popular appreciation and recognition. The medical profession has apparently not used enough effort to educate the public to appreciate and utilize these advances.

Furthermore, there is a discrepancy between the tendency of physicians to

specialize and the need for such specialists. Statistics show that 45 per cent of the men in practice limit their work wholly or in part to some specialty and only 18 per cent are really needed.

The report also gives the astounding data that the great majority of people do not receive adequate medical care. In the analysis of nearly 10,000 families 46 per cent of those whose income was below \$1200 per annum received no medical care whatever, even though needed, and many of the others had very incomplete medical service. It shows there are thousands of well trained physicians struggling for the barest living, waiting for patients to treat and on the other hand there are millions of persons suffering for want of adequate medical services. There are hundreds of well equipped hospitals, with thousands of empty beds, struggling to avoid bankruptcy, while thousands of patients are suffering and often dying because of lack of hospital care. This is the result of unorganized distribution of medical services and inefficient utilization of those available. This fact brings up the question whether the proper distribution and utilization of medical services available would not justify considerable alteration of present methods of practice.

The Committee is to be commended upon the courage with which it has attacked the problems of medical practice and, while the medical profession may not agree with its recommendations for the solution of the problem, it should study their recommendations carefully in working out the best solution for delivering adequate medical service to every individual at a cost that he can afford to pay, or providing such service to the indigent without placing an unfair burden on private practitioners.

The report maintains that it is unfair and economically unsound to expect the

private physician to provide medical services to the indigent population. The medical needs of the unemployed and penniless individuals should be borne by the community as a whole and not by the physicians and hospitals alone. Such care takes much of a physician's valuable time and he must make this up by charging his pay patients more. These patients represent a relatively small fraction of the community and are thus compelled to support this charity service and, consequently, are further penalized by being ill.

Two suggested remedies are offered by the Committee; one represented by the majority of the members and the other by the minority. The former would take the initiative away from the individual physician and substitute hospitals, institutions and groups for medical centers from which all medical services are rendered to the great bulk of the population. The latter would emphasize more and more the importance of the general practitioner as the unit from which more complete and efficient medical service should be rendered. The former plan would provide better organization and efficiency but would augment the evils of the group clinic, would take away from the doctor who is the most experienced and most capable individual, the control of medical services and tend to break down the vital, intimate relation between the physician and the patient, which is so important in giving the latter confidence in the former. The majority of the committee also recommended extension of government services. While it is probably true that the majority plan would provide better distribution it would be apt to lower the quality of the medical service rendered and leave the control of medical services in the hands of laymen.

The report of the Committee is a chal-

lenge to the medical profession. The present unequal distribution and often inefficient service has developed under the control of the medical profession. Now that their attention has been called to these deficiencies it is the duty of the physicians collectively to bend every effort to eliminate these evils. Individually, doctors have given unselfishly of their time and energy, but collectively they have allowed matters to develop to a point where they may lose control of the character of medical service to be provided the general public.

The minority report emphasizes that the general practitioner is the center from which efficient medical service must radiate. There is a tendency on the part of most laymen to let the members of the medical profession manage this care, but will they do this systematically and efficiently in each community? Fortunately, there are growing indications that physicians are recognizing they must act collectively as well as individually to provide adequate care to every patient at a cost he can afford. There are many who doubt the ability of physicians to get together and bring about a more efficient and equitable distribution of medical services. They feel that the doctors are either too busy with their own affairs, too jealous of each other or too individualistic to provide a general concerted action of all members of the profession in that locality.

It is quite necessary that each local medical organization, such as the county medical society, shall study the problems in its community and recommend and support a plan that will force the community as a whole to take its share in the care of the indigent and provide all other patients adequate medical services at a reasonable cost. It should be remembered that adequate medical service does not mean the best service. The latter may

include many luxuries that are conventional but not essential to recovery from an illness and these add considerably to the expense of medical care. Most patients do not need special nurses, private rooms and special diets. For those who can afford these accessories they are entirely desirable. Failure to make such a study may lead to dissatisfaction and a revolt on the part of the public with the possible adoption of unpleasant and unsatisfactory plans of rendering medical services.

The criticism is often made of the modern physician that in his effort to conquer disease he often forgets that disease must have a patient to exist and that the patient should be given just as much if not more consideration than the disease. The physician should not only assist the patient in overcoming the disease but should also do this with as little expense as possible. Most doctors do keep this in mind but there are many who ignore the expense and demand unnecessary consultations and laboratory examinations. *x*-Rays are often taken and instruments of precision are often used when patients cannot afford them. Unnecessary laboratory procedures often undermine the patient's confidence in his physician, especially if he cannot understand why he has to pay all these extra charges. The clinical history and a thorough physical examination are inexpensive and usually provide the diagnosis. There are, of course, a smaller number of cases in which the use of such measures are definitely indicated and the additional cost justified. There are times when the patient urges these special tests upon the doctor, but if their expense and their futility in this particular instance be explained, the patient soon loses his enthusiasm for them. It is too often that these special procedures are ordered without ever explaining their need and

cost to the patient and, naturally, when he gets his bill he is quite irritated at all these extra charges.

Undoubtedly, the proposal of the minority members of the Committee offers the better solution of the defects in medical services rendered, but the great difficulty is whether the physicians as a whole will take this seriously. There are two objections to the success of this plan of making the general practitioner the center of appropriate and efficient medical care. First, the tendency toward "fee splitting," a pernicious practice that seems prevalent in certain communities although discountenanced by all reputable societies. This is a practice that inevitably breeds distrust of the doctor and makes the patient feel he is being "sold" to a certain specialist. This is one reason some patients pick out their own specialists.

The second objection is that the general practitioner does not always recognize the financial limitation of his patient and orders consultations, and laboratory and x-ray examinations that are not essential. Moreover, he often gives a drug that is expensive when a much cheaper one, that is just as potent, could have been given. Often a considerable amount is paid by the patient to get a drug under a particular trade name. For example, aspirin costs several times as much as acetyl-salicylic acid, and yet both are the same drug.

An important factor in enabling a general practitioner to carry out his practice economically and efficiently would be the establishment of diagnostic facilities at every hospital for the use of his patients, with a low charge just sufficient to cover the cost of these diagnostic procedures. Such facilities could be provided in any well organized hospital. The family doctor could then send his poorer pay patients to this clinic and

get these procedures completed without financially ruining the patient.

One often wonders why there is so much complaint about the cost of medical care when the reports show that it is not exorbitant and that many physicians have an income of less than \$2500. Perhaps this is due to much unfavorable propaganda, some of which may have been entirely unintentional. Even the hospitals get out reports that could be more favorable to doctors. In annual reports of hospitals considerable emphasis is placed on the number of free patients cared for and the number of free hospital days, but nothing is said of the money value of the operations performed and the visits by the attending men of these patients. If this were done the charity services expressed in dollars would not look so favorable as that of the services rendered by the attending staff, and the community would get a better conception of the charitable burden carried by the members of the medical staff.

It is perhaps also worthy of comment that the hospital in its early development was designed to aid the physician and to be one of the means of carrying out more efficiently and conveniently the physician's wishes. It was originally a distinct agent of the physician. The present tendency and the plan suggested by the majority report would reverse this relationship and make the physician an agent of the very instrument that he created, a rather dubious rearrangement.

Shortly before the final report of the five year study of the Committee on the Costs of Medical Care was published another five year report by a national Committee on Medical Education was submitted to the public. This report is filled with factual data on problems of medical education, the distribution of physicians, postgraduate medical educa-

tion, the tendency to specialization, and the costs of medical education. It shows that there are more physicians in the United States than are needed and that the present medical schools are producing more physicians than the country requires, causing more overcrowding, especially in the cities. It states that physicians tend to go to cities for social and economic reasons, and if better hospital facilities are provided or made accessible in the rural communities, many physicians would leave the crowded cities and go into the rural communities. This report gives data of the greatest importance to medical students and teachers and it is a most valuable supplement to the recent report of the larger committee.—H.R.W.

EDITORIAL COMMENT

Recent studies indicate a ten per cent decrease in mortality in pneumonia cases treated with oxygen.

The annual meeting of the Mid-Western Section of the American Congress of Physical Therapy will be held at the Hotel Jefferson, Peoria, Illinois, May 15.

Harvey J. Howard, M.D., Professor of Ophthalmology, Washington University School of Medicine, has resigned to enter private practice. Dr. Howard was one of the guest speakers at the 1932 meeting of the Kansas Medical Society.

During the year 1932 the total number of deaths in the state from diphtheria was 75, an increase of seven over the year 1931. Typhoid fever deaths totaled 31, a new low record. Tuberculosis caused 622 deaths, the previous low number being 645 in 1927.

Glover and Engle report the production of metastatic malignancy in one of a group of guinea pigs inoculated with a

culture containing a spore-bearing microorganism which was isolated on special medium from the tissue of a microscopically proved carcinoma of a human breast. (*Public Health Reports*, March 31, 1933.)

“It has been said that if our nasal secretions were tinted with some bright color, the most fastidious of us would marvel at our own carelessness and a little more care along this line coupled with shielding the face during coughing and sneezing would materially reduce the incidence of diseases transmitted by fomites.”

House Bill No. 431, as reported in the March JOURNAL requires the annual registration of all doctors of medicine practicing in the State of Kansas. Registration is effective July 1. Dr. C. H. Ewing, Secretary of the Board of Medical Registration and Examination will forward the necessary forms to the last known address of all physicians licensed by that board.

Thirty years ago it was thought that cancer was a disease peculiar to man. The fact that animals suffered from cancer was not recognized. As the result of a great deal of research work, Bashford and Murray were able to prove that cancer occurs throughout the vertebrate kingdom, and that in its general biological and pathological features cancer in vertebrate animals is subject to the same laws that govern its incidence in man. Its occurrence is most frequent, both in man and in animals, when the subject is in advanced years. Cancer is thought to be about fifty times less frequent in young people than in middle aged and old people. (*Jour. I.S.M.A.*, Feb., 1933.)

THE LABORATORY

Edited by

J. L. LATTIMORE, M.D., Topeka

Gastric Contents

In considering the gastric contents and its pathological changes a brief review of the physiology involved will give us a better understanding of the entire subject.

The different secreting glands located for the most part in the upper digestive tract, such as the salivary and gastric glands, secrete ferments, enzymes, water and inorganic substances which in turn break down the carbohydrates into monosaccharids, neutral fats into fatty acids and glycerine and the proteins into amino acids. Further down the digestive tract we have the secretions from the liver, pancreas and the crypts of Lieberkuhn, all of which play a very definite role in digestion and a disease of one of these glands or a combination of these glands results in many of the so-called "stomach upsets."

The control of these glands is through either the nervous system or by hormones. The salivary glands are an example of the nerve controlled; the liver of the hormone controlled. The gastric glands are partly under nerve control and partly under hormone control. The common expression "it makes my mouth water" is literally true, the presence of appetizing foods stimulates the salivary glands. Experimentally at least this is true and in sham feeding of dogs it has been proven that certain gastric glands react to nerve stimulation, through the vagus. Carlson is of the opinion, however, that in man with the highly complicated nervous system, this stimulation is completely absent in most cases. There can be no doubt but that palatability of food plays a very important part in salivary and gastric secretion. This point has a very practical application in the convalescing patient. Rather than order diet number so and so, why not inquire of the patients as to their likes and dislikes and then order food they will relish.

These nerve stimulated juices, so-called appetite juices, last for only about

15 to 20 minutes while the food remains in the stomach for about four hours. It would follow then, that there must be other digestive juices and they must be hormone controlled. It is well established that this is a chemical stimulation and not mechanical, such as a foreign body or tumor in the stomach or intestine.

The average meal in the normal stomach causes a secretion of approximately 700 cc. of gastric juice of which about 200 cc. is secreted within the first hour; 150 cc. in the second hour and 350 cc. in the third and fourth hours. Fats inhibit the secretion of gastric juices and many cases complaining of nausea following a meal can be explained when the diet is investigated and found to be overbalanced with fat.

The pancreatic juice for the most part is under hormone control, the nerve control playing very little part. As a result, the secretion does not depend upon the kind of food so far as palatability is concerned but it is known that the secretion is more active in the presence of bread and less so with milk. The pancreas secretes an enzyme which acts on polysaccharids and another on fat.

Bile is delivered from the gall bladder as a result of reflex contraction of the gall bladder due to nerve end stimulation, resulting from chyme coming in contact with the duodenal mucosa. A portion of this bile aids digestion for a certain part is reabsorbed. In addition to aiding digestion, bile also aids in the absorption of fats.

Digestion in the stomach is mainly carried out by the hydrochloric acid secreted in the cardiac end of the stomach and pepsin, which is secreted in both the cardiac and the pyloric ends. The acid has three functions: assists pepsin in digesting proteins; assists in the inversion of saccharids and acts in an antiseptic capacity. In the normal stomach, the gastric content, as leaves the pylorus is sterile.

In the intestine, in addition to the different juices, bacteria play a very important role, especially in splitting proteins and carbohydrates.

Now that the physiology is briefly reviewed, we come to the routine examination of gastric contents, which will be discussed next month.

RECENT MEDICAL LITERATURE

Edited by
WILLIAM C. MENNINGER, M.D., Topeka

ASTHMA

Rackemann as the result of this study finds that the longer a series of patients with asthma is studied, the more evident it becomes that true "cure" is a doubtful prospect even though the patient may remain symptom-free for long periods. The number of cases originally studied was 1,074. In 1928, the number of "cured" cases 213 and has been reduced to 131 or 12 per cent, of the original total. It seems evident that fundamental allergy is a remarkable persistent trait. The conception of the "capacity to develop a sensitiveness" as a supplement to von Pirquet's conception a "capacity to react" seems justified by the observation of patients over periods long enough to see that they tend to develop sensitiveness to new substances in their environment. It is the capacity which is fundamental. Its nature is quite unknown. The author feels that progress will be more rapid as one learns that in asthma the fundamental problem lies not in the sensitiveness to any particular protein or in the incidence and treatment of nasal disease, but in the study of the capacity to develop sensitiveness to foreign substances.

Asthma: XVI. Two Hundred and Thirteen "Cured" Patients Followed Up Four Years Later, Rackemann, Francis M.: Archives of Internal Medicine: 50:819-829, December, 1932.

LEGAL ASPECTS OF PROTECTION IN RADIOLOGY

The writer outlines in detail the precautions that the radiologist should take and in the summary states that he should make accurate, clear records at the time of treatment, taking care to show what information and instructions were given to the patient. He should get accurate history covering all information required, even if one must press for it. Particularly is it important to avoid perfunctory compiling of histories by un-

skilled assistants. The patient should receive and understand proper instructions for the care of irradiated areas to protect themselves and the radiologist, especially should they be warned of the dangers of additional exposure on the same or adjacent areas until directed by the radiologist. One should leave as little to technicians as possible and supervise that little as closely as possible.

Legal and Insurance Aspects of Protection in Radiology. Wanvig, H. F. Radiology. 19:29-32. July, 1932.

JUVENILE OBESITY

The writer who is from the Endocrine Clinic from the Department of Medicine at the Northwestern University Medical School, chooses 50 unselected cases of obesity in childhood and adolescence to study the possible relationships of obesity with endocrine disturbances. He starts by pointing out the divergence of opinion, some observers regarding glandular disorders as unimportant as primary causative factors in obesity and others considering the majority of cases of obesity on an endocrine basis. From this study the author finds that 44 out of the 50 cases showed some disturbance in the pituitary and sex glands, moderately low basal metabolism without hypothyroidism, abnormal sugar tolerance, or mental deficiency. However, these anomalies found represent deviations from the normal in both directions inasmuch as in some cases hypofunction and in other cases hyperfunction of the same gland was found. This suggests that there is a relationship between endocrine anomalies and obesity but that it is of an etiological nature. He believes that the etiology of obesity whether it is juvenile or adult is a disturbance of the mechanism that regulates the body fat content, and is probably hypothalamic in origin.

Juvenile Obesity. Rony, Hugo R. Endocrinology. Vol. 16: 601-610. November-December, 1932.

ARSPHENAMINES IN NEUROSYPHILIS

The writer's material consists of 500 cases of neurosyphilis, of which 79 per cent were men and 21 per cent were women. It is shown that the more serious type of involvement is much more common in cases where arsphenamine was

not given, as compared with the cases in which inadequate or adequate arsphenamine treatment was given. Of the fifteen patients who were well treated during the acute syphilis, 60 per cent manifested asymptomatic neurosyphilis. Adequate antisiphilitic treatment given after the diagnosis of neurosyphilis had been proved efficient when its effects on the spinal fluid, blood and clinical symptoms are considered. This efficiency is equally manifest in cases in which previous treatment had not been given, except that the blood was normal in a greater percentage if arsphenamine had been given previously than if it had not been given. That arsphenamine predisposes to, or induces the development of, neurosyphilis is not borne out by this study. In 500 proved and unselected cases of neurosyphilis, arsphenamine had not been given in the early period of the infection in 85 per cent. It is felt that the modern treatment of neurosyphilis is of pronounced value in reducing to a minimum the clinical, serologic and spinal fluid manifestations of the disease.

The Arsphenamines as Factors in the Production of Neurosyphilis, O'Leary, Paul A., Rogin, James R.: Archives of Dermatology and Syphilology, 26:783-797, November, 1932.

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(Continued from Page 192)

topic is made readable and interesting. Few writers can compress their subject matter without exsiccating it. But this little book has all the juice and flavor that any one could desire. I can heartily commend it to the busy practitioner as a practical help and pleasant diversion in his crowded life.—O.P.D.

UROLOGY, edited by John H. Cunningham, M.D., Associate in Genito-Urinary Surgery, Harvard University Post-Graduate School of Medicine. The Year Book Publishers, Inc., Chicago. Price \$2.25.

The 1932 Urology Yearbook, edited by Dr. John H. Cunningham, one of the best beloved of American urologists, lives up to its reputation of supplying much valuable information in a condensed form. Covering a multitude of subjects, and containing some unusually excellent plates, this little book serves a unique purpose. The 24 pages in this edition given to transurethral operations are particularly valuable, not only be-

cause of the bibliography, but because of the newness of this most important subject.—A.D.G.

THE PRACTICAL MEDICINE SERIES—NEUROLOGY, edited by Peter Bassoe, M.D., Clinical Professor of Neurology, Rush Medical College of the University of Chicago. PSYCHIATRY, edited by Franklin G. Ebaugh, A.B., M.D., Director, University of Colorado Psychopathic Hospital; Professor of Psychiatry, University of Colorado School of Medicine. The Year Book Publishers, Inc., Chicago. Price \$2.25.

This little compendium which for the first time is put out under joint authorship of Doctors Bassoe and Ebaugh maintains its former very high standard of reviews. Doctor Bassoe points out that there is an increasing number of motor accidents and head injuries which is the subject of an ever increasing output of articles. Other subjects of unusual scientific interest have been spinal anesthesia, serums and vaccines, and unsuspected chemicals used in various industries. Doctor Bassoe believes the outstanding contribution of the year has been Cushing's description of the clinical picture of basophilic adenoma of the hypophysis.

Doctor Ebaugh regards the most significant scientific trend to be the closer relationship established between psychiatry and the other fields of medicine, especially pediatrics. More articles have appeared concerning psychiatry in medical education than in previous years, as well as placing emphasis upon the value of psychotherapy in general medicine.

This is an excellently prepared little book, well bound, of 468 pages with a very good index both of subjects and authors.—W.C.M.

THE PRACTICAL MEDICINE SERIES—OBSTETRICS, by Joseph B. DeLee, A.M., M.D., Professor of Obstetrics, University of Chicago Medical School; Chief of Obstetrics, Chicago Lying-In Hospital and Dispensary. GYNECOLOGY, by J. P. Greenhill, B.S., M.D., F.A.C.S., Associate Professor of Clinical Gynecology, Loyola University Medical School; Professor of Gynecology, Cook County Graduate School of Medicine; Attending Gynecologist, Cook County Hospital. The Year Book Publishers, Inc., Chicago. Price, \$2.50.

The yearbook, Obstetrics and Gynecology, series 1932, is of marked interest in the careful short reviews of the literature on obstetrics and gynecology of the past year, with interesting and instructive comments by the editor at the end of most of the articles. This is especially true in the section on obstetrics.—W.H.W.

COUNTY SOCIETY NEWS

BARTON COUNTY MEDICAL SOCIETY

The Spring Meeting of Barton County Medical Society, held at St. Rose Hospital, Great Bend, April 21, was attended by 53 doctors from various parts of western Kansas.

Dinner was served at 7 p. m. by the Sisters of the hospital and was of the usual high quality that has helped make our meetings popular. This was followed by a regular program in the auditorium of the hospital which was arranged and given by the Sedgwick County Medical Society. Dr. Fred J. McEwen, Wichita, presented a very instructive paper on the "Irregular Heart", which was illustrated with lantern slide drawings and electrocardiograms. Mr. Mac F. Cahal, lay secretary of the Sedgwick County Medical Society, gave a very interesting account of recent legislation at Topeka and stressed the necessity for the medical profession to take up the question of public relations, of entering the political field and lobbying for what we want, and for more information and contact with the public by radio, the press, and other ways to break down State Medicine and build up the intimate relationships of doctor and patient. He urged a full-time secretary for the state society and an aggressive, efficient program for years to come to combat the cults and secure for medicine the recognition due it. His talk brought considerable discussion started by Dr. Scales of Hutchinson, who strongly approved the full-time secretary plan and a perpetual lobby at Topeka. Dr. Melencamp, Dodge City, thought these meetings would do much to crystalize sentiment among doctors to get somewhere. Dr. McEwen thought more men should attend the state meeting and stay for the third day and see that delegates were instructed to get these things, and see to it that live men were selected on the Board of Counselors. Dr. T. J. Brown of Hoisington thought all the societies there represented should see that they were represented in the House of Delegates and were instructed to get busy toward the accom-

plishment of these things. Dr. Ewing, of Larned, took issue with the lobbying idea as proposed and thought more was gained by the state society's policy of writing and telegraphing remonstrances to the members of the legislature. Dr. Ewing also asked the support of the profession in the newly enacted registration law. Dr. Robison urged doctors to participate in civic affairs of their town.

Visiting doctors from the following towns outside of Barton County included Wichita, Hutchinson, which chartered a bus and came in a group, Sterling, Stafford, St. John, Kinsley, Rozel, Dodge City, Coats, Pratt, Ness City, Spearville, Hays, Bushton, Lyons, and Chase.

The Society feels highly complimented on the large attendance from such a section of the state and believes that much good was done in arousing a sentiment for vital changes in medical matters in Kansas.

L. R. MCGILL, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The April meeting of the Clay County Medical Society was held Wednesday evening, April 12, at the Municipal Hospital in Clay Center. Dr. C. E. Earnest of Pueblo, Colorado, discussed "Lipiodol Injection of the Paranasal Sinuses" and read numerous case reports supplemented with x-ray films to demonstrate the method and the results. He also showed a motion picture illustrating tonsillectomy by the suspension method.

L. E. Alquist, D.D.S., of Clay Center, was a guest.

W. H. ALGIE, M.D., Secretary.

DICKINSON COUNTY MEDICAL SOCIETY

The regular quarterly meeting of the Dickinson County Medical Society was held at Hotel Daily in Herington, April 20.

After the usual dinner and business the following papers were presented: The Diagnosis and Treatment of Goiter, by Tracy Conklin, Jr., M.D., Abilene, and The Differential Diagnosis of Acute Diseases of the Abdomen, by R. G. Gomel, M.D., Abilene.

Both papers covered their respective fields very thoroughly and were enjoyed by all members present, as evidenced by

the comment aroused.

We were pleased to have Captain Cuban of Ft. Riley as a guest at the meeting.

The next meeting will be held at Hope, July 20.

K. E. CONKLIN, M.D., Secretary.

FORD COUNTY MEDICAL SOCIETY

The Ford County Medical Society held their regular monthly meeting in the Lora Locke Hotel, Friday, April 14. Dinner was served in the Jade room at 6:30 p.m. to forty members and visiting doctors. The guest speaker was Dr. Calkins of Kansas City who gave a very interesting discussion on "Cancer of the Cervix, the Diagnosis and Treatment with *x*-Ray and Radium." He had many lantern slides and stressed the importance of typing the cancer by biopsy.

Doctors Vermillion and Bernstorf of Pratt gave an interesting case history with many *x*-ray pictures.

After an informal but spirited discussion of the desperate plight of community hospitals the secretary was ordered to send the following wire to the President of the United States:

"Be it resolved by the Ford County Medical Society and representatives from Gray, Kiowa, Edwards, Pratt, Haskell, Grant, Finney, Hamilton, Ness and Pawnee counties, that said society and representatives in regular meeting, go on record as being opposed to the opening and operation of the Veterans Hospital in Wichita, and that said society strongly urge the President of the United States to prevent such opening in the interests of economy and general public welfare, believing that the patients can be better cared for in hospitals in their home communities, these hospitals, because of the desperate economic conditions are near empty or closing, leaving tax burdened communities without hospital facilities.

"This measure is prompted by the belief that an investigation should be instigated to determine why the unreasonable expenditure of approximately a million and a quarter dollars for the building of a 150 bed hospital."

The Dodge City Chamber of Com-

merce requested the Ford County Medical Society appoint a committee to confer with them in reference to the unsatisfactory working of the Crippled Children's Law. Doctors Janney, Dennis and Hooper were appointed on this committee. From the discussion it would appear that this section of the country is not as yet "Chandler conscious."

Doctors Dennis and Klein were appointed delegates to the annual meeting at Lawrence.

A motion was made and carried instructing the Secretary to send a memorandum to the Kansas Medical Society expressing our discontent with the Crippled Children's Law and urging them to protest against this discriminative, unnecessary and unfair law.

C. L. HOOPER, M.D., Sec.-Treas.

THE LYON COUNTY MEDICAL SOCIETY

The Lyon County Medical Society held its regular meeting at the Newman Hospital, in Emporia, at 8 p.m., April 4, following the usual monthly dinner.

Dr. Frank Foncannon, of Emporia, presented a case, demonstrating end results of very severe burns of the lower extremities.

Dr. Ralph H. Major, of Kansas City, was the speaker of the evening. His discussion was "Diabetes Mellitus," stressing mostly the history, differential diagnosis and treatment. The paper was very interesting and was followed by considerable discussion.

Two guests from the Greenwood County Medical Society were present.

D. R. DAVIS, M.D., Secretary.

RUSH-NESS COUNTIES MEDICAL SOCIETY

The Rush-Ness Counties Medical Society met at the office of Dr. W. Singleton, La Crosse, Kansas, April 18.

Due to the storm Dr. Latimer was called home and not many came. Dr. N. W. Robinson presided in Dr. Latimer's absence. The meeting was called to order and as there was no new business the scientific program was opened.

Dr. Coffey of Hays presented a paper on "Osteomyelitis" with lantern slides; also gave the diagnosis and treatment of the disease. This was an excellent paper

and was discussed generally by those present. Because of the storm the meeting was adjourned to meet in May at the office of Dr. Robinson at Bison.

An excellent lunch served by Mrs. Singleton, who was assisted by Mrs. Pokarney and Mrs. Harper, was enjoyed by all.

The visiting guests were Doctors Coffey and Scherr of Hays; Dr. Brady of Plainville; Mr. Harper, druggist at La Crosse, and Mrs. Harper; Mr. Pokarney, also druggist at La Crosse, and Mrs. Pokarney; and Dr. Eberhart, dentist at La Crosse.

Members present included Doctors Attwood and Singleton of La Crosse; Robinson of Bison, and Latimer of Alexander.

W. SINGLETON, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, Monday evening, April 6, President Marvin Hall presided.

The guest speaker, Bernard H. Nichols, M.D., Director of Roentgenology, the Cleveland Clinic, Cleveland, Ohio, discussed the "Differential Diagnosis of Upper Right Abdominal Pain Roentgenologically Considered." Dr. Nichols' talk was extremely interesting and illustrated with approximately 100 lantern slides.

More than 90 members of the society and visiting physicians were present.

EARLE G. BROWN, M.D., Secretary.

WYANDOTTE COUNTY MEDICAL SOCIETY

The Pathological Conferences, conducted by Dr. H. R. Wahl, and Dr. Kerr of the University of Kansas, School of Medicine, in the Wyandotte County Medical Society, have been proving very valuable and very instructive to the members of the Society. This is, perhaps, best evidenced by the increased attendance at each meeting since these conferences were installed.

On April 4, Dr. M. A. Walker gave a very instructive presentation of the "Value of Simple Laboratory Procedure in the Management of Surgical Cases."

Dr. J. B. Nanninga read a paper on "The Reactions Following the Treatment of Syphilis." On the same program, Mr. Seath, of the State Dairy Association, presented facts about "Milk and Its Value as a Food." On April 18, a clinical program was presented, at which time Dr. D. N. Medearis presented a case of Primary Anemia in an infant; Dr. C. E. Coburn, a case of Spleenic Anemia in a girl 10 years old; Dr. C. J. Mullen presented a case of Disuse Amblyopia; and Dr. A. J. Rettenmaier presented a case of Ruptured Appendix with abscess which drained through the abdomen and rectum.

The following names were passed for membership in the Wyandotte County Medical Society: Doctors C. Alex McBurney, Otto J. Hartig, E. C. Badger, and Emery C. Bryan. The membership in the Wyandotte County Medical Society has shown an increase this year over previous records.

It was voted by the society that a spring party for the doctors and their wives, consisting of a banquet program and dance, should be given at Quivera Lakes Clubhouse on the evening of May 31. The dentists and druggists and their wives will be invited to attend the party.

O. W. DAVIDSON, M.D., Secretary.

R

DEATH NOTICES

CLOSE, JOSEPH H., Topeka, aged 68, died April 7, 1933. He graduated from Rush Medical College in 1894. He was not a member of the Society.

JENKINS, NOAH SAMUEL, Kansas City, aged 68, died March 8, 1933, of acute myocarditis. He graduated from Lincoln Medical College in 1907. He was not a member of the Society.

MINNEY, JOHN E., Altadena, California, aged 88, died April 10, 1933. He graduated from Kansas City Medical College in 1880. He was formerly an active member of the Kansas Medical Society.

YINGLING, WILLIAM A., Emporia, aged 82, died April 7, 1933. He graduated from Kansas City Homeopathic Medical College in 1890. He was not a member of the Society.

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka

Chairman of Publicity

Now is the time to think of vacations and plans—no doubt numbers of doctors all over the United States are going to the convention in Milwaukee—and it looks as though this time the wives have a delightful week planned for them.

For Auxiliary women and all other wives of physicians, here is the Preliminary Program of the convention in Milwaukee followed by such an invitation as will warm your heart, fire your imagination and, we hope, crystallize your determination to join the forces gathering at Milwaukee, June 12-16, 1933.

HEADQUARTERS

Hotel Pfister, Milwaukee, Wisconsin.

MONDAY, JUNE 12, 1933

12:30 p.m.—Luncheon at College Woman's Club in honor of Past Presidents, followed by national board meeting and visit to American Medical Association exhibits at auditorium. Tickets \$1.00.

7:00 p.m.—Dinner for national board, delegates, and wives of officers and delegates of the American Medical Association at Woman's Club of Wisconsin. Musical program furnished by artist members of Auxiliary to Medical Society of Milwaukee County. Tickets \$1.25.

TUESDAY, JUNE 13, 1933

9:00 a.m.—General meeting—Roof Room, Hotel Pfister. Mrs. James Percy, presiding.

12:30 p.m.—Luncheon and bridge at the Wisconsin Club. Tickets \$1.25.

2:00 p.m.—*Attractions available for those not wishing to play bridge are Layton Art Gallery, Milwaukee Art Institute, Milwaukee Museum, Curative Work Shop and Vocational School.

*Bus trip to county institutions, Milwaukee Children's Hospital Convalescent Home, and Washington Park Zoo.

8:00 p.m.—General meeting of American Medical Association.

10:00 p.m.—Informal dance at Wisconsin Club courtesy of State Medical Society of Wisconsin. Hostesses: Woman's Auxiliary to the State Medical Society of Wisconsin.

WEDNESDAY, JUNE 14, 1933

9:00 a.m.—General meeting—Roof Room, Hotel Pfister. Mrs. James Percy, presiding.

12:30 p.m.—Auxiliary Luncheon—Fern Room, Hotel Pfister. Guests and speakers from the American Medical Association. Musical program. Tickets \$1.00.

4:00 p.m.—*Teas in private residences.

8:30 p.m.—Light Opera Tickets \$1.00.

THURSDAY, JUNE 15, 1933

9:00 a.m.—General meeting—Roof Room, Hotel Pfister. Mrs. James Blake, presiding.

12:30 p.m.—Buffet luncheon—Crystal Room, Hotel Pfister. Tickets 75c.

12:00 Noon—Trip to Oconomowoc Lake District. Luncheon 12:30 p.m., Carnation Milk Plant, Oconomowoc. Wisconsin, Transportation and Luncheon courtesy of Carnation Milk Company.

2:00 p.m.—*Sight-seeing tour of Milwaukee.

*Bus transportation to be paid by individuals.

6:30 p.m.—"Bring Your Husband" Dinner—Fern Room, Hotel Pfister. International-House-Cabaret. Tickets \$1.50.

9:00 p.m.—President's Reception and Ball—Schroeder Hotel. Hosts: The American Medical Association.

FRIDAY, JUNE 16, 1933

10:00 a.m.—Golf Tournament—All trips start from Hotel Pfister.

Mrs. Rock Sleyster, General Chairman.

Mrs. William Liefert, Chairman Hotel Committee, 4103 North Murray Avenue, Milwaukee, Wisconsin.

All women attending this Convention whether Auxiliary members or not are invited to participate in this entire program.

MILWAUKEE INVITES YOU

When you come to Milwaukee in June to attend the annual convention of the Woman's Auxiliary to the American Medical Association, you will find a store of pleasures awaiting you. First of all the program, as arranged by the local committees under the chairmanship of Mrs. Rock Sleyster, is completely arranged for your pleasure and entertainment; and secondly, the city of Milwaukee is such a friendly and hospitable metropolis that the combination will leave a pleasant impression upon your memory.

Milwaukee is situated on the western shore of Lake Michigan, the largest fresh water lake in the country. Its beautiful harbor is the deepest and one of the

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largest on the Great Lakes. Through the city three navigable rivers wind their ways into the heart of the down-town district and empty into the lake. The pioneers found the rivers and the lake to be important means of transportation but they never dreamed of what they would mean to the commerce and industry of the new-born city in days to come. Today Milwaukee ranks the twelfth largest city in the United States with a population of approximately 800,000.

You may be surprised to know that besides being a commercial city, Milwaukee is really a beautiful residential city. Its parks and playgrounds scattered throughout the city cover an area of more than 1500 acres. These parks scattered along the lake shore and the courses of the rivers and dotted picturesquely throughout the city offer the comforts of beauty, recreation and rest to all who come to them.

Lake Park, the northeast edge of Milwaukee, is a fine expanse of woodland on Lake Michigan and its approach from the down-town district, along Lincoln Memorial Drive is one of the most beautiful features of the city. The Drive is a wide concrete boulevard extending for six miles along the lake shore, passing by the wild-life lagoon, the Coast Guard Station, the Yacht Club, the Gun Club, and many bathing beaches, and then leading directly into Lake Park from which it continues on through one of the exclusive residential districts.

Washington Park, on the west side of the city, has as its feature the nationally known Washington Park Zoo. It is the largest municipally owned animal exhibit in the United States. It boasts of a unique Monkey Island where thousands of people yearly watch the many different types of monkeys frolicking about unhampered on this island. Another new and recently completed attraction is a barless bear den, constructed as a natural refuge, separated from the onlookers only by a very deep moat from which the bear cannot escape.

Mitchell Park on the south side of town is famous for its conservatory and the wonderful displays of chrysanthemums, orchids and many rare flowers. In addition to this there is a formal sunken garden, most beautifully arranged and planned.

Be sure to avail yourselves of the privileges which Milwaukee women will afford you to see these and many other lovely parks and the surprisingly beautiful residential districts.

Down town you will find the hotels modern and clean, and convenient to all convention activities as well as to the shops and tea-rooms. The New Pfister Hotel, ("new" because it has been remodeled recently) is an old and famous hostelry where many of our country's presidents have stayed while in Milwaukee. You will particularly enjoy the noted and extremely valuable art collection on the mezzanine floor. This hotel as you know, will be our Auxiliary Headquarters.

There is another important but very different reason for your coming to Milwaukee this year. Chicago with its great World's Fair "The Century of Progress" is only 80 miles away or two short hours by bus, train, or electric. When ever before was it possible to make two such interesting and valuable trips in one?

Not only the doctors and doctors' wives but all of Milwaukee will welcome you most heartily when you come in June. Already the most minute plans for your pleasures and comforts are being made, and if you have any suggestions as to some particular service which you think our guests would appreciate, write the General Convention Chairman, Mrs. Rock Sleyster, 1220 Dewey Avenue, Wauwatosa, Wisconsin, and she will see that your wish is carried out if it is in any way possible.

Remember the dates, June 12-16 and begin now to tuck away the necessary dollars to make it possible for you to partake of the many benefits of the convention and of Milwaukee hospitality.

—R—

Accepted Devices for Physical Therapy

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Hoyland's Smax Not Acceptable—The Committee on Foods reports that the Hoyland Flour Mills Company, Kansas City, Mo., submitted a lightly toasted, coarsely ground wheat with fine flour removed called "Hoyland's Smax—All of the Wheat Toasted." The following statements appear on the package label: "Smax is extremely high in food value and containing all the bran is a natural laxative. Because of its high phosphorus and calcium content—in a natural state—Smax makes an ideal food for growing children. . . . Nature's food as nature intended." Calcium claims in public advertising for cereals are misinformative and misleading. The claim is suggestive of current whole wheat food faddism and, although meaningless in fact, is popularly cogent because of its vagueness. The manufacturer was informed of this opinion but has ignored letters giving the Committee's recommendations. This product, therefore, is not listed among the Committee's accepted foods. (Jour. A.M.A., February 25, 1933, p. 576.)

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TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of January 28 the following have been accepted:

Don Baxter Intravenous Products Corporation: Sterile 5 per cent Dextrose Solution in Vacoliter Container; Sterile 10 per cent Dextrose Solution in Vacoliter Container.

Hille Laboratories, Inc.: Colloidal Mercury Sulphide-Hille.

Hoffman-La Roche, Inc.: Ampules Scopolamine Stable-Roche, 1/100 gr., 1 cc.

The following products have been included in the List of Articles and Brands Accepted by the Council But Not Described in N.N.R. (New and Nonofficial Remedies, 1932, p. 487):

Don Baxter Intravenous Products Corporation: Physiological Sodium Chloride Solution in Vacoliter Containers.

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Diphtheria Toxoid—U.S.S.P.—A diphtheria toxoid (New and Nonofficial Remedies, 1932, p. 370) prepared from diphtheria toxin whose L+ dose is 0.2

cc. or less by treatment with formaldehyde. The product is standardized to contain in 2 cc. enough of the toxoid for one immunization treatment. It is marketed in packages of two 1 cc. vials; in packages of twenty 1 cc. vials; in packages of one 6 cc. vial; in packages of one 20 cc. vial; and in packages of one 30 cc. vial. United States Standard Products Company, Woodworth, Wis.

Maltine with Mineral Oil and Cascara Sagrada.—A mixture of liquid petrolatum (New and Nonofficial Remedies, 1932, p. 245), 40 cc. and Maltine (New and Nonofficial Remedies, 1932, p. 273), 60 cc. containing a non-bitter extract of cascara sagrada representing 2.2 gm. of cascara sagrada per 100 cc. The Maltine Co., Brooklyn, N. Y. (Jour. A.M.A., February 11, 1933, p. 411.)

Sterile 5 per cent Dextrose Solution in Vacoliter Container.—Each 100 cc. contains dextrose, U.S.P. (New and Nonofficial Remedies, 1932, p. 262), 5.25 gm. Don Baxter Intravenous Products Corporation, Chicago.

Sterile 10 per cent Dextrose Solution in Vacoliter Container.—Each 100 cc. contains dextrose, U.S.P. (New and Nonofficial Remedies, 1932, p. 262), 10.5 gm. Don Baxter Intravenous Products Corporation, Chicago.

Ampules Scopolamine Stable-Roche, 1/100 gr., 1 cc.—Each ampule contains 1.2 cc. (1 cc. contains 0.0006 gm. of scopolamine hydrobromide). Hoffmann-Le Roche, Inc., Nutley, N. J. (Jour. A.M.A., February 25, 1933, p. 574.)

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The following products have been accepted by the Committee on Foods of the American Medical Association for in-

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clusion in Accepted Foods:

Prune Krush Brand California Pure Prune Pulp (California Fruit Krush Co., San Francisco).—Cooked, pureed prune pulp; in tins. It is claimed to be used for all table uses of prunes, is laxative and may be used in soft diets.

Pfizer Citric Acid, Anhydrous (Charles Pfizer & Co., Inc., Brooklyn).—Coarse granular, fine granular or powdered anhydrous citric acid meeting all U.S.P. tests for hydrated citric acid for purity; assaying not less than 108.8 per cent as U.S.P. citric acid. It is for use in foods when an organic acidulant is desired.

Morton's Iodized Salt (Morton Salt Company, Chicago).—Table salt containing 0.023 per cent potassium iodide, 0.1 per cent sodium carbonate and 0.7 per cent magnesium carbonate. The iodine in the salt aids in preventing goiter caused by insufficient iodine in the diet.

Heinz Pure (Virgin) Olive Oil (H. J. Heinz Company, Pittsburgh).—Imported first cold press (virgin) Spanish olive oil. It is claimed to comply with U.S.P. and U. S. Department of Agriculture requirements. (Jour. A.M.A., February 18, 1933, p. 499.)

Pantry Table Cream (S.M.A. Corporation, Cleveland).—Canned sterile homogenized cream of 18 per cent milk-fat content.

Heinz Strained Spinach (H. J. Heinz Company, Pittsburgh).—Canned comminuted and strained cooked spinach retaining in high degree the mineral and vitamin contents of the natural product. (Jour. A.M.A., February 25, 1933, p. 576.)

Propaganda for Reform

Some Endocrine Preparations of the Rovin Laboratories not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that the A. M. Rovin Laboratories, Inc., Detroit, submitted for consideration a series of "uniglandular" products. The firm submitted no advertising for the products but

presented descriptions and statements of the claims made for the various preparations, together with trade packages of each. The Council declared Corpus Luteum Solution (Rovin), Kidney Solution (Rovin), Lymphatic Solution (Rovin), Mammary Solution (Rovin), Ovarian Solution (Rovin), Ovarian Residue Solution (Rovin), Thyroid Solution (Rovin), Pituitary Anterior Lobe Solution (Rovin), Suprarenal Gland Solution (Rovin), Suprarenal Cortex Solution (Rovin), Thymus Solution (Rovin), Spleen Solution (Rovin), and Prostate Gland Solution (Rovin) unacceptable for New and Nonofficial Remedies because they are products of indefinite composition and of undemonstrated therapeutic value; and declared Pituitary Anterior Lobe Sex Hormone Solution (Rovin), Liver Solution (Rovin), and Orchic Extract (Rovin) unacceptable because they are products of undemonstrated therapeutic value. (Jour. A.M.A., February 25, 1933, p. 574.)

REPRINTS

Reprints of original articles will be furnished the authors at the following rates, if the order for same is received within fifteen days after the Journal is mailed. These prices are based on the number of pages of the Journal the article occupies:

Three pages or less, first 100, \$7.50; additional 100s, \$2.00. Four pages, \$10.00; additional 100s, \$2.50. Five pages, \$12.00; additional 100s, \$3.50. Six pages, \$15.00; additional 100s, \$4.50. Seven pages, \$17.00; additional 100s, \$5.50. Eight pages, \$20.00; additional 100s, \$6.00.

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ORIGINAL ARTICLES

PRESIDENT'S MESSAGE

The Financial Angle of the Medical Profession*

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Manhattan, Kansas

Before proceeding with my annual address I wish to pause for a few brief moments to pay tribute to one we have all known well and whom we have all so greatly admired.

It is the fate of every organization to have experienced the influence of some valued member and then at the very apex of that man's power to have him taken from it. Yet the influence for good which that member has given, lives on as an inspiration for those left to follow.

On December 29, 1932, this organization lost a staunch friend and a great worker in the death of Paul Stafford Mitchell. He was our friend. "A friend is one who redeems our negative days."

His life and his whole life work radiated friendship. Friendship is a powerful work. To be able to appeal to someone when one is in trouble or distress and to be secure in our thoughts of understanding and sympathy from that one is a great consolation. Dr. Paul Stafford Mitchell was that friend to us individually and to this society.

His universal sympathy with humanity of all ages endeared him to his patients and his fellow workers. He probably did more than any other member of the Kansas Medical Society to further its high ideals and standards. His is an example for which we should ardently aspire.

As you know, he was a Virginian by birth, receiving his education at the University of Chicago, Northwestern Uni-

versity, Hering Medical College, University of Illinois and the New York Post Graduate School. He graduated from Hering Medical College in 1899 and served the community of Iola until his passing. His influence has been far reaching.

In 1931 he was named as President of the Kansas Medical Society; assumed the duties of his office on January 1, 1932, but lacked three days of serving his elective term.

Well might we all emulate the great virtues which were so profoundly expressed by the works of his life; true genuine friendship, helpfulness, leadership and courage.

With the passing of Dr. Paul Stafford Mitchell this society and his community have lost a valued member and a genial brother.

Let us rise and bow our heads for one minute in reverence of him at this time.

I am pleased to have this opportunity to thank the members of the Kansas Medical Society for selecting me to be their president. I am very much interested in the profession and to be elected president of the state society certainly gives me a thrill equal to any I could think of that might fall to any man.

It was a great pleasure to have helped organize my county society to represent it as president on several occasions; to have been a member of the Golden Belt Medical Society, afterwards being elected president of that society—and by the way, I want to express my opinion, it is one of the best sectional societies of the state; then represent the state society as its vice-president and finally as its president, is certainly an honor of which any man living should be very very proud. Really, I feel I should be the envy of every member of the society who has not served in such a high capacity. I must not forget to thank all of my officers and

*Read before the 75th annual meeting of the Kansas Medical Society, Lawrence, May 2, 3 and 4, 1933.

associates who have so generously given their time and assistance to make this meeting a success, and to help in every way possible to make the Kansas Medical Society better and more interesting to the profession as well as a society of which any physician would be proud to be a member.

Again assuring you of my appreciation for election of this office and asking for your continued assistance until my term is completed, I will proceed with the main topic of my subject, which I have chosen, "The Financial Angle of the Medical Profession." It has taken me about six months to find a suitable and appropriate subject for my annual address.

Somehow I believe this horrible depression, or financial calamity if you care to so call it, which has been so prevalent in all the countries, has been more pronounced and more destructive to the medical profession than to any other profession or line of business. It is no idle dream that the doctor is the last one to be paid. The layman boasts that "he has paid all of his debts but the doctor and he can wait." Who is to be blamed for this? You will agree with me it is the doctor, himself. How many of you have the patient make arrangements to pay you or collect at the time the work is done? Does your grocer, your merchant, your druggist, your carpenter, your painter, in fact does any one whom you owe, treat you as lax in a business way? All you have to sell is your brain, in which the average doctor has from ten to thirty thousand dollars invested. If he dies his investment is lost, wherein the case of a farmer or merchant the estate has an established business which has a sale value, something his dependents can commercialize—not true with a profession.

It is quite a well recognized fact that the doctor is the poorest pay of any business man in town; indeed he is about the poorest business man in town. The most ignorant layman makes of him and thinks of him as a target or a good meal ticket and proceeds to punch it. He will do even more—very often he will

keep one who does pay from patronizing his doctor and will be the last man to recommend the doctor to a pay patient.

Every new doctor, God pity him, is the goat and is immediately made a prey for the dead-beat. At one time, this was true, the old family doctor was the most respected and perhaps the most loved man in the community. It was he who knew the family secrets and kept them locked up in his bosom with a great deal of pride. He was the first one appealed to for sympathy or advice and not in a professional way alone. Next to the family it was he who was to share in the family fortunes, as well as their depressions. The family doctor must live, and well too, that he might be the better able to administer more efficiently to his patients. These conditions do not exist any more, therefore, we must play a different role.

The layman picks up the new doctor who comes to town; not always, in fact seldom, because his family physician had not given him good service, but because he owed him. He stays with his new possession until the poor doctor awakens to the fact that there is no money forthcoming, then he drifts to some other sucker. He continues this until, if the truth was known, he has obtained his medical services for several years without paying one penny to the doctor. This could be easily remedied in any community with a little organization, or if you care to call it cooperation, by the profession. Every county has free medical services for any one; represented in many cases by very competent men. So you see this is not producing or forcing a hardship on any patient. You and I pay taxes to hire just such services. I hope I am not being misunderstood but I feel it is high time we are giving these matters some serious thoughts. I would not want to be understood that I, nor would I expect you, not to make a call when summoned. If the case seems to have the ear marks of a prolonged one, after the first treatment, I think we should begin to consider the ability of the patient to pay. You and I must have some return on our investment; you and I must necessarily pay our over-head and operating

expenses, as well as providing for our personal and family needs. Our profession demands that we live and dress well, we must have the very best equipment, we cannot buy these things without money. Personally, I believe it would be good business sense to report to our local societies the names of those who made it their business to endeavor to beat their doctor bills. If any such person leaves your city, why not obtain through some source his destination and report him to the local society in the community in which he makes his future home? An effort on the part of every physician to carry out these methods would soon eradicate the professional dead-beat; would let the world know that the practice of medicine was really a business proposition; and the medical profession would soon command more respect and a higher degree of standing with the layman.

If the assistance of an attorney is needed, he, without any hesitation on his part, asks you for a retainer fee—and you respect him for it, you have more confidence in his ability. This shows that the attorney is a business man and the doctor is not. I wonder how many of you realize the small amount of education, compared with that of a physician, is required for one to become an attorney.

Why not have compiled and given to every member a directory? This, I believe would help stimulate membership. When one of our patients intends or does move to another place give him the name of some doctor, or probably better still, if he is a worthy patient, a letter to the doctor in the town in which he expects to locate. Also report the patient to the local society of that town as to his pay qualifications in the past.

There are many people at this strenuous time looking for some easy money. There are people under ordinary conditions who are perfectly honest, yet desperation has driven them to take any lead that has a possibility to get some money. Lawyers too are hard up and looking for business. Therefore, we should at this time be more guarded than ever about our conversation, otherwise

we might easily kindle a smoldering fire resulting in causing our colleague to be forced to defend a nasty malpractice suit, which under ordinary conditions would not have had enough background or foundation to have been started.

Oftentimes these malpractice suits are started against the doctor with no thought of them going to trial but in hopes a settlement would be perfected to save the publicity. These settlements I am not in favor of and if there was co-operation with the doctors there would seldom be one started. You all realize that to make it possible for a case to get to a jury it is necessary to have expert testimony on the part of the plaintiff to show negligence and we will all agree that 90 per cent of these cases are without foundation.

Anyone can be sued and if sued he must defend himself—with a lot of worry to go through, considerable expense to meet, as well as undesirable criticism and publicity. So again I want to emphasize the thought—be careful how much sympathy and encouragement is given by you when approached. The time to kill these malpractice suits is to kill them before they get to a lawyer. If we would all follow this plan our annual dues could be cut at least one-third. I again want to protect my address in not being misunderstood—I would have no hesitancy in helping a layman in a malpractice suit if I really thought the layman was warranted in bringing the suit, but my experience has been that more than 90 per cent of them are unwarranted; brought by unworthy people to get some easy money from an easy prey and as a rule border upon blackmail.

Now, let us not forget that the army of salesmen—let them be equipment men, drug men, stock or bond salesmen or gas, oil and mining stock salesmen, are always on the doctor's trail to sell him some of their wares. I wonder if there is a doctor present who has not been caught on some "get rich quick" scheme. We are looked upon as easy marks and are "on the spot" at all times. If the doctor, who has practiced for any length of time, had the money that he has thrown away on schemes of this kind he

today would be coasting along in good shape and having no thought of there being a depression.

Keep out of debt—there is nothing cheap that you do not need. This idea of ten dollars down and so much a month is only getting you in trouble. The interest rate in most of these instances is often as high as 15 per cent.

Another neglected part of the financial angle of the practice of medicine is the failure of the physician in his locality to get interested in politics. This is the duty of all of us if we expect to get any legislation favorable to our cause. We all realize that state medicine is gaining ground. Also, true the osteopaths and chiropractors are getting a great foothold in Kansas, in fact, Kansas is a dumping ground for the chiropractors. Do you know the medical practice act permits the osteopaths and chiropractors of Kansas to do surgery and prescribe medicine. This year, (thanks to our past-president, Dr. Duncan) there has been more good medical legislation obtained than any year for the last ten. I am sure if we will give politics a little more attention the Basic Science act or one similar can be put into a law. The senate was more considerate than the house. Two years from now either send an M. D. from your own county to the legislature or see that the candidate for that office is interviewed to find out how he stands on the medical subject. Men of the profession, it is high time we were giving the legislative question serious consideration. This is important and demands some careful thinking on our part. Remember this advice and act. We have made a good start this year; next year it will be easier to follow up.

I am of the opinion there are too many free clinics. I also believe the laity shamefully abuse the privilege of a free clinic. A free clinic, if any is held, should be under the direction of the county doctor with an understanding on the part of the layman that these clinics were for the use of the poor entirely, and the time of the clinician should not be used by people who were able to pay. This could be handled through the mayor, the poor commissioner or the county doctor. I

have, and you too, have seen people who were well able to pay indiscriminately abuse this privilege. I want to see every county organization take some steps to stop these abuses. We are all generous enough to devote a certain amount of our time to charity, but are not willing to have that charity privilege so horribly abused as it is now being done under the poorly managed system we have at the present time.

The free examinations, various inoculations and treatments for school children are very fine and philanthropic; yet I do believe they should not be free, they should be paid for out of the school funds; for every \$100.00 raised in my county for taxes \$44.80 goes to the city schools of my own town alone. This does not mean to rural schools or schools in other cities of the county. You and I pay these taxes, yet we are placed in the same classification in many instances with the osteopaths and chiropractors who give no time. We have been too timid. "Self preservation is the first law of nature." I again say it is high time that we as M.D's. are looking out for our own financial rights.

Now let us look at the financial angle of the practice of medicine from the layman's side: The layman seeks the services of the doctor for a general physical examination or maybe for some ailment which the family doctor thinks some laboratory findings are necessary. He sends him across the hall to a genito-urinary specialist; to the next room for a blood count or blood examination, then down the hall to the Röntgen ray man, next to the ophthalmologist for an eye examination, possibly to a stomach specialist and so on. I am not opposed to these laboratory examinations, but with the education these men who are at this time being graduated from medical colleges, I feel that all of this work could and should be done in most cases by the family doctor, himself. Otherwise, the expense to the layman or patient makes it almost prohibitive for him to solicit your services. Oftentimes there are instances when such special services cannot be avoided, but I do believe where possible the average physician should prepare

and equip himself to do all of this work. If there is anything about the case he does not understand then I say call in a consultant. I think this is being expected of us more every day.

You know many states are requiring all physicians, who qualify as specialists in any particular branch of medicine, to become members of the state society and to be credited by that society after passing the required qualifications and examinations given by a board for that purpose.

In this country, New Jersey as well as New York have, I believe, taken the initial step along this line. For some years many foreign countries have required this standing from the proposed specialist. Time will not permit me in this paper to go into detail on this subject; neither is it necessary as there is a very concise and clear article covering the important points in the April JOURNAL written by our editor. I am heartily in favor of such a plan and hope the society will give it some consideration at this meeting.

Again, I am asking not to be misunderstood in this financial angle of the practice of medicine. I have been in the game long enough to know that no "Santa Claus" ever recognizes any member of the medical profession. A great per cent of the doctors die poor, except for the amount of life insurance they leave to their families.

I feel sure many of these views I have endeavored to convey to you will not meet with the approval of all the members of the society, but possibly you will accept something or some suggestion in this address that will help to make of you a better business man—with a better business standing in your community and be able to live better and more comfortable in your declining years.

—R—

Whitefield Genuine Orange Juice, Whitefield Genuine Grapefruit Juice and Whitefield Genuine Orange Butter Acceptance Withdrawn.—The Committee on Foods reports that the Los Angeles Sales Company, Los Angeles, formerly Whitefield Citrus Products Corporation of California, Ltd., Fullerton, Calif., has not provided the required information and data for these foods which are now being called for by the Committee under its present Rules and Regulations. Therefore, the acceptance of these products is being withdrawn. (Jour. A.M.A., April 15, 1933, p. 1175.)

STERILITY IN THE FEMALE*

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This subject is too large a one to be covered in a paper of this kind. My reason for presenting it is that a greater interest might be aroused in the minds of the men in general practice; those who frequently see these women and are inclined to give them a hopeless outlook after a superficial examination.

A renewed interest in fertility-sterility has been awakened by the recent developments in our knowledge of the endocrine system and many former theories have been discarded. At the same time light has been shed on many phases of sterility that formerly were unknown. A woman who is anxious to become a mother can no longer be put off with some casual statement as to why she has not conceived and borne her baby to successful fruition.

Since scientific investigations of sterility have been carried on many new factors have been discovered that make it possible to help many of these cases. One of the first surprises was the frequency of male responsibility in sterile matings—given as high as 42 per cent in one series. This has made it advisable and necessary that the female should not be subjected to any operative examination or treatment until the male partner has been proven of at least average fertility. Another fact developed in the past few years is that only the occasional individual is free from some condition that lowers the percentage of fertility and usually more than one condition is present. The presence of multiple factors in sterility have made the investigation far more difficult and necessitates careful evaluation of the different conditions found, if we are to arrive at anything like an accurate opinion of the chances for a given couple to bear children.

Investigation and treatment of male sterility is a long procedure and not in the scope of this paper except the procuring of specimen of semen after its deposit in the female genital tract and its

*Read before the 75th annual meeting of the Kansas Medical Society, Lawrence, May 2, 3 and 4, 1933.

behavior there. If necro or oligospermia is found it is obviously useless to subject the female to long series of examinations or some operative treatment when her partner is infertile. If found to be potentially fertile then the examination and treatment should be directed to the female.

I do not propose to deal with any phase of sterility that is of scientific interest only, but to limit myself as much as possible to the practical side.

Midway in the scale between absolute sterility and fertility will be found the threshold of conception, and a fruitful mating depends on whether the product of male and female fertility-sterility falls above or below this level of fertility. And since there are so many factors involved in sterile matings and usually more than one factor present in one or both partners it is easy to understand the percentage of chances for a given couple. When both are highly fertile the percentage falls far above this threshold and many pregnancies can be expected, or if one is highly fertile and the other low the number of pregnancies will depend on whether the product of their two fertility per cents falls on or below this level. Since some of the factors vary in degree at different times and under different conditions this curve will not be constant at all times for a given couple, and when it rises above the threshold, fruitful mating may result much to the joy of the couple and the embarrassment of the physician who has pronounced them sterile. This is especially likely in some of the functional cases without absolute sterility for it is in these we find the greatest variations, if watched over a period of years, and accounts for the pregnancies after long years of infertility. I have, in the past few years, seen a number of such cases—one in a primipara 43 years old after 17 years of infertile marriage; another 26 years old that had been married 8 years. This patient, a pituitary-ovarian hypofunction case, began menstruating at 12 years but never had a period more often than 6 months and had gone as long as 3 years. These periods always required

hypodermics to control the pain—which is characteristic.

Child's classification of sterility still holds its place as probably the most satisfactory one. He divides them into:

1. Primary—Those that never have conceived.

2. Secondary—Those with one or more pregnancies and later become sterile.

3. Relative—Where conception takes place with early death of the embryo or birth of a nonviable foetus.

4. Functional—Involuntary sterility with stigmas of endocrine malfunction but no demonstrable organic cause found in the genital organs.

If the cause is one of absolute sterility as a gameto-genetic failure or a complete blocking of the tubes it is practically hopeless.

In properly assessing a given case one should first go into the family history for evidence of constitutional inferiority or familial taint and the personal history from character of birth to the present time. Inquiry should include nutritional disturbance of early childhood; at what age she walked; dentition; early caries; diseases of childhood, especially any serious illness with any of the exanthemata and what if any serious sickness in the prepubertal and adolescent age. This may be the cause of endocrine imbalance or hypofunction, especially if coming just prior to the age of puberty. Hypoplasia of the uterus and ovaries are now generally considered the result of what happened at this age. One should obtain an accurate history of the age of onset, character, amount and regularity of the menstrual function together with any changes in subsequent years. In this history we may often find the cause of sterility, especially when interpreted with the later physical examination, i.e., the thin, flat breasted, fussy, nervous, eccentric, story-book old maid type of woman invariably gives a history of late onset of menstruation attended by severe cramping with scanty flow lasting but a few days due to ovarian hypofunction. What sickness has she had later, and how did she react to it, and has she had a difficult time recovering from attacks

of illness? Has she always "caught everything that came along," or has her life been one of unusual health and vigor? In the absence of gross stigmata of degeneration this is the only way one can rule out constitutional inferiority and make the physical findings fill out the picture in true perspective. History of abdominal conditions with subsequent foci of infection, adhesions following operation, or inflammation may be the determining cause we are looking for and may add weight to our pelvic examination. The sexual life should be investigated carefully—presence or absence of vulvo-vaginal mucus, libido, orgasm, frequency of coitus, whether coitus interruptus has been the habit, dyspareunia, or anything connected with the marital relations that might produce a chronic pelvic congestion.

There is no doubt now about the role of diet and hygiene in fertility-sterility. With the advent of fads in diet and reducing, many individuals have so lowered their vitality and brought about such metabolic changes that it takes careful regulation and building up to get them back to normal bodily vigor and functions before their fertility percentage reaches the threshold of conception. This is especially true where they have been on low proteid diets and the nitrogen balance has been greatly lowered. I have had more than one sterile patient where regulation of diet and vigorous outdoor life was all that was necessary to raise their fertility to the level where conception took place. Obesity of itself does not produce sterility but its causes do—whether lack of exercise, improper food intake, or pituitary hypofunction. Improper diet and hygiene often produce an anaemia of sufficient degree to lower fertility. Chronic infections whether from the teeth, tonsils, sinuses, gall-bladder, colon, or cervix act in the same way through lowered vitality. No one or even two of these conditions may be sufficient but when several are present in the same individual we can easily see that her percentage of fertility is greatly lowered and if her mate has not an unusually high level of fertility a sterile mating results.

In the physical examination we should be alert to detect all possible stigmata of degeneration and signs of endocrine hypofunction. The condition of the skin, quality and distribution of hair, unnatural fat deposits, physique, lack of nervous stability all have their significance.

During the pelvic examination the possibility of pituitary hypofunction and its sequelae—unnatural growth and distribution of hair, small vulva, deep perineum, short anterior vaginal wall with short narrow vagina must not be overlooked. A gaping vulva and vagina or a short one with narrow spasmodically contracting walls may cause so early loss of semen that fertilization does not take place. The size, shape and location of the cervix and in what direction it points, the size and location of the corpus uteri and the cervico-corpus ratio which normally is 1:2. Is the uterus freely movable and are the adnexae palpable or hypersensitive? Often one can palpate the enlarged hard multicystic ovary that indicates the tough thickened tunica albuginea which has prevented the development and rupture of the graafian follicle and freeing of the ovum and normal involution of the corpus luteum. New growths in the cervix or its canal or the corpus may be of such size or so located as to prevent normal migration and union of the semen and ovum or subsequent implantation. This may come about by pressure on or blocking of the cervical canal or the internal os, pressure on or kinking of the tubes, or pressure on the uterine mucosa causing endometrial changes unfavorable to implantation or subsequent development of the ovum. Then with a speculum the vagina and cervix are inspected, the vaginal mucous examined for acidity, the os and cervical canal inspected for possible cervicitis, and the viscosity of the cervical mucous ascertained. This is practically always alkaline even with severe cervicitis. The canal should be examined for polypi, erosions and strictures and a tight internal or external os. These produce sterility more often by the tough viscid mucous plug that entangles and blocks the ascent of the spermatozoa mechanically

rather than by chemical destruction. I have had two cases in which flaps of cervical mucosa made cup-shaped valves in the canal sufficient to block the ascent of the sperm. Conception took place after their removal. In my series, cervicitis has been the most frequent cause of sterility and its cure resulted in more pregnancies than any other condition. A note of warning should be sounded concerning the use of the cautery in these cases. The widespread enthusiasm in its use has resulted in reports of an increasing number of severe cervical strictures. It is wrong to use a heavy cautery on these cases as one does where total destruction of tissue is desired, but rather light strokes even if necessary to repeat treatment later on. The improvement in the local condition, removal of the viscid mucous, together with the improvement in general health by removal of a chronic focus of infection, is the explanation of the increased fertility. I have long since found it advisable to warn a case so treated that pregnancy is much more likely following its cure.

The Huhner test should now be made for presence or absence of fertile spermatozoa. If no motile sperms are found in the vagina and seminal pool a condom specimen should be examined for oligo and necrospemia. If motile sperms are found in the vagina an hour or more following intercourse specimens should be aspirated from different levels in the cervical canal to determine their fate and whether they have reached the internal os. When motile sperms are found at the level of the internal os it is practically certain the female is to blame if conception does not take place and her further examination and treatment is justifiable. A tubal patency test will show presence of blocking, spasm, or total occlusion of the tubes and may be of greatest therapeutic value by restoring the lumen of the tube through loosening adhesions within the tube, or straightening kinks from uterine malposition and prolapse of the ovary which has made entrance and descent of the ovum difficult or impossible. Where this test shows the tubes completely occluded or where verified by opaque oil injections a laparotomy for

opening them is necessary. This will give best results where the blocking is caused by adhesions at the fimbria or so located as to cause kinking. Partial resection may be necessary in some cases. If the ovaries are enlarged, with multiple cysts and thickened tough tunica albuginea that has prevented normal development of the graafian follicles and their rupture, with attendant abnormal corpus luteum, multiple punctures to relieve intra-ovarian tension is sometimes followed by normal ovulation and conception.

Removal of fibroids either intramural or so located as to make pressure on the tubes or cause their kinking should be advised. If not a cause of failure of conception they may later result in miscarriage, cause obstruction to normal labor, or produce severe trouble postpartum.

In suspected cases of ovarian hypofunction or endometritis a premenstrual curettage is of diagnostic and often therapeutic value. Where we find a short anterior vaginal wall, a short narrow vagina with its usual accompanying sharply flexed retroverted uterus a properly fitted pessary after replacing the uterus is of decided therapeutic value—not only by holding the uterus in position but by actually lengthening the vaginal tract as is evidenced by the necessity of using longer pessaries as the case advances. Another benefit of the pessary in these cases is the relief of oedema and passive congestion in the uterus and tubes which if great enough will greatly decrease their patency as has been repeatedly shown by tubal insufflation before and after the pessary had been used. Again, the restoration of the uterus and adnexae to normal position gives the ovum easier access to the tubal ostium.

We are likely to find our greatest difficulty and disappointment in cases of constitutional inferiority, for some of these cases have been hopeless from birth while the rest are the result of severe diseases of early childhood or the prepubertal age that has resulted in destruction or hypofunction of the endocrines and the consequent hypoplasia of special organs. Further investigation may make possible a glandular treat-

ment that will restore the lowered or lost endocrine action and bring these hypoplastic, hypofunctioning organs more nearly to normal.

Basal metabolic rates should be run on both male and female in suspected cases of hypofunction, where metabolic de-

rangements are suspected and in cases with history of early abortion of dead embryos. It is surprising to find men capable of impregnating with sperms of so low vitality that the embryo soon succumbs because of their thyroid hypofunction. In the older textbooks, iodine

No.	Yr.*	P†	CONSTITUTIONAL	LOCAL
1	5	+	(H) B.M.R. —22.	2 prev. Ab. at three months. K.I 2nd preg. but aborted. Husband took thyr. for 3 mos. and living baby.
2	6	—	Pit. Hyper. Ob.	Tub. Occlusion. Cervicitis.
3	5	—		Endocervicitis. Cautery.
4	10	+	Ov. Hypofunction.	Memb. Dysmenovar. Ther. 1 child 12 yrs. ago.
5	3	—		Retro and Pelvic Hypoplas. Endocerv.
6	3	+		Alk. Endocerv. Stricture, caut., and Alk. Douches.
7	4	—	B.M.R. —18	Hypoplas pelvic organs. Endocerv. Caut. and Thy.
8	9	—		Endocerv. Caut.
9	3	+		Endocerv. Rtube Oc. Caut. Tampons.
10	3	—		Chr. G.C. Tubal occlusion.
11	3	+	B.M.R. —5 Thyr.	
12	2	—		Tub. Oc. (Post Abortal)
13	5	—	Hypoplas. (Pit.)	Pelvic Hypoplasia and Hypofunction.
14	2	+	Ovar. Ther.	Hypoplasia.
15	4	—	Pit. Hypofunction. Ant. Pit.	
16	8	—	B.M.R. —24 Pit. Hypofunction	Pelvic Hypoplas.
17	5	+	B.M.R. —15 Thyroid.	
18	2	+	Ov. Hypoplas. Hygiene diet & Ov. Ther.	
19	2	—	(Hus.) Hyperthy. Constitu'al Inferiority	
20	5	+	1 child 3 yrs. old	Retrover. Endo. Pessary. Caut.
21	19	—	Pithypoplasia. Obese.	Pelvic Hypoplas. Ovarian hypofunction.
22	4	—	B.M.R. —16 Thy.	
23	15	—		Multiple Fibroids.
24	—	—	Ovar Dysfunc.	Pelvic Hypoplas.
25	—	—	Ovar. Hypoplas & Hypofunction	Endocerv.
26	7	—	Hus. Toxic. Thyr. Oligosperm.	
27	10	+	Ovar. Hypofunc.	Multiple fib. Endocerv. Caut.
28	7	+	Husb. B.M.R. —21 Thy. Ther.	Endocerv. Caut.
29	—	—	Pit. & Ovar. Hypofunction	Pelvic Hypoplas.
30	12	+	Uterine Hypoplasia	Fib. below ov. kinked tube. Tubal Inflation.
31	1½	—	Hus. Oligo & Necroperm.	Constitutional Inferiority.
32	3	+	Exophthalmic goitre removed 4 yrs.	Diet Hygiene.
33	3	+		Endocerv. Caut.
34	5	—	B.M.R. —12 1 preg. 4 yrs.	Endocerv. Caut. Thyr.
35	4	+	B.M.R. —12 & —15 Thyr.	2 prev. spont. Abortions. Hygiene.
36	10	—		Multiple Fib.
37	2	+		Endocerv. Caut.
38	3	+	Toxic thyr. Removed 4 yrs.	Retrovers. with kinking. Pes.
39	5	—	Hus. Cons. Infer. B.M.R. —19	Oligo and Necroperm. Thyr. Hyg.
40	5	+	Ov. Hypoplasia & Hypofunction	Pelvic Hypoplas. Ov. Ther.
41	4	+	1 Abortion Relative Sterile.	Endocerv. Caut.
42	—	—	Pit. & Ov. Hypofunction.	Pelvic Hypoplas.
43	6	+		Fib. Level Int. Os., Dil. Cervix.
44	5	+	Ov. Hypofunction & Secondary Pit.	Pit. Hyperplasia. Diet Hyg. Ov. Ther.
45	6	+	Pri. Ov. Hypofunction 43 yrs. age.	Hygiene and diet.
46	8	+	Ov. Hypo. Secondary. Pit. Hyperplas.	
			Due to severe inf. at 12.	

*Denotes years of sterility.

†Pregnancy resulted or not.

The above cases are presented to call attention to the large number showing more than one factor causing sterility.

The small number having had gonorrhea with subsequent tubal occlusion is unusual. There is a large number of these cases showing hypoplasia and hypo-

function of the pelvic organs. Note also the unusually large number of cases with endocervicitis that became pregnant with cauterization of cervix and clearing up of viscid mucous plug which evidently was mechanically obstructing ascent of spermatozoa as only one showed chemical hostility.

was recommended empirically in habitual abortion even in the absence of known or suspected syphilis. It no doubt had its value by stimulating the thyroid to sufficient activity to allow development to go on. The greatest result and benefit with glandular therapy is seen in thyroid deficiency. This condition can be more easily determined, checked and controlled by repeated metabolic rates and quicker response is seen than with any other glandular deficiency. I have had four sterile matings due to thyroid deficiency in the male, three of which had successful pregnancies following the use of thyroid; the fourth is a case of constitutional inferiority, the thyroid deficiency being only one of his hypofunctioning organs and in spite of regulation of diet, exercise, improving his blood state and raising his basal rate he still shows oligo and necrospemia. The close inter-relation of the endocrines and recent studies of their interaction lends hope to glandular therapy. *x*-Ray stimulation of hypofunctioning glands sometimes raises them to activity sufficient to make pregnancy possible. But treatment should be entrusted only to expert roentgenologists because of the attending danger.

SUMMARY

1. Sterility of given couple not always due to female, and no operative examination or treatment of female is justifiable unless male known to be fertile.
2. Multiple factors rather than single one present in most cases.
3. Proper evaluation and removal of these factors necessary to raise fertility level of couple to that of threshold of conception.
4. Constitutional inferiority plays important role in fertility-sterility and may be the cause of absolute sterility. This is either congenital or prepubertal in onset.
5. Glandular therapy is greatest hope in such cases of hypo-function and recent investigations promise much for it.

INFECTIOUS MONONUCLEOSIS (Glandular Fever) With Report of Cases*

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The definition offered by Tidy and Morley fits the disease best: “. . . an acute infectious disease, principally of children, characterized by rapid enlargement of the cervical glands and by a less constant enlargement of the liver, spleen, axillary, inguinal and other glands.” To this may be added that there is a constant change in the blood picture as manifested by a mononuclear increase.

Credit for recognition of glandular fever is generally given to E. Pfeiffer² who, in 1889, wrote of it as “Druesen-fieber,” although attention has been called to the reference of N. Filatow³ to an idiopathic lymph adenopathy four years earlier. Since then there have been numerous papers discussing the blood picture, symptoms, epidemiology and nomenclature. Turk⁴ in 1907 reported three cases in which he noted a marked increase in the mononuclear cells of the blood. Five years later Cabot⁵ in a report on “The Lymphocytosis of Infection” discussed the blood picture. Sprunt and Evans⁶ in 1920, Bloedorn and Houghton⁷ in 1921, Gilbert and Coleman⁸ in 1925 and others since then have reported blood examinations along with case reports showing in the great majority of cases the tendency toward an absolute lymphocytosis with a preponderance of abnormal or immature mononuclear cells.

The matter of a proper title for a clinical picture that has been diagnosed more and more frequently in the past 40 years has brought forth considerable discussion. Many early writers considered glandular fever an abortive type of influenza and refused to believe that it was a definite clinical entity. There was for many years confusion in differentiating it from Hodgkin's disease and lymphatic leukemia. Tidy and Morley¹ set forth reasons why glandular fever should be considered a definite disease and

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showed its identity with previously reported cases of "acute lymphatic leukemias with recovery," "infective mononucleosis" and "lymphocytosis due to sepsis." Sprunt and Evans⁶ described their cases in adults as infectious mononucleosis, a term which has been more generally used in this country than in Europe, and which seems to fit the clinical picture even better than glandular fever.

Pfeiffer's¹ report discussed the occurrence of the disease in epidemic form or in "house epidemics," and stated that where one child of a family was affected the others seldom escaped. Various epidemics involving from a few up to a hundred cases have been reported in Britain and Europe. West² in 1896 reported 96 cases occurring in 40 families in Ohio. Guthrie and Pessel⁹ observed 300 cases in a group of 500 boys, ages 13 to 18 years, in a school in New Jersey. Gilbert and Coleman⁸ in 1925 reported over 100 cases in an epidemic in New York State and studied 63 cases with reference to family occurrence. They found that in the 13 families with a total of 43 children and 32 adults 90.6 per cent of the children and 46.8 per cent of the adults contracted the disease. Baldrige²⁸ reported 34 cases occurring in epidemic form at the University of Iowa in 1924. They call attention to the fact that the so-called sporadic cases probably are evidences of mild epidemics in which the majority of the cases are unrecognized. Carlson, Brooks and Marshall¹⁰ reported an epidemic of 838 cases in Wisconsin with careful studies on 79. In 1929 Davis¹¹ reported an epidemic of ten cases in a nursery and was able to give accurate information on the prodromal period, incubation period and duration of active symptoms. A sporadic case in an infant was considered worthy of report¹² since most cases in infants and children have been in epidemic form. In young adults the disease is frequently of the sporadic type.^{28, 13, 14, 15, 16.}

Early writers suggested streptococci, pneumococci and the influenza bacillus as the causative organisms and offered in each case limited proof of their assertions. Deussing,³ Coon¹⁷ and Baldrige²⁸

report the recovery of a diphtheroid bacillus from cases of infectious mononucleosis, but the latter points out that such bacilli are frequently contaminations in the media, that they are frequently present in throat cultures and that they have been recovered from lymphoid tissues in various diseases among which were Hodgkin's disease and scarlet fever. Bloedorn and Houghton⁷ and Longcope¹⁸ found Vincent's organisms in their cases. Baldrige²⁸ found positive throat smears in 27 of 29 cases examined but also found in a control group that smears from apparently healthy gums showed in 47 of the 55 cases spirochetes and fusiform bacilli in large numbers. Stookey¹⁹ believes, from his observations, Vincent's organisms are normally present in the mouth. Lichtenberg²⁰ found fusospirochetal organisms in 45.4 per cent of tonsils removed from 108 children and in 91 per cent of the membranes that formed over the tonsillar beds after tonsillectomy. In a limited survey made in our dispensary during routine physical examinations we found 84 or 42 per cent positive smears for either fusiform bacilli or spirochetes or both in smears taken from 100 men and 100 women, but in cases where both forms occurred in appreciable numbers there was evidence of gingivitis.

Biopsies on lymph glands in the cases reported by Sprunt and Evans,⁶ Longcope¹⁸ and Baldrige²⁸ showed a gland soft, spongy and distended, with marked hyperplasia of the lymphoid tissue, with numerous mitotic figures and with no increase in fibrous tissue.

The mode of transmission is not known. Early writers suggested that the disease was of gastro-intestinal origin. Because of the frequency of upper respiratory symptoms with glandular fever others favor the person to person mode of transmission. Spencer²¹ studied an epidemic in North Carolina and was able to rule out milk and ice-cream, water and insects as carrying agents.

CLINICAL PICTURE

The clinical picture is illustrated by the following report of cases coming to my attention, 32 in the Health Service at the University of Wisconsin and 13

at the University of Kansas. There were four fairly distinct types of onset:

1. With sore throat, headache and malaise, simulating an acute upper respiratory infection,

2. With the only complaint being swollen glands,

3. A slow insidious onset over a period of two weeks or longer with complaint of fatigue, loss of weight, occasional morning sore throat, subacute nasal infection, night sweats, insomnia and sometimes digestive upsets, and

4. A precipitous onset with chills, fever, prostration and few abnormal physical findings.

The following cases represent the various types:

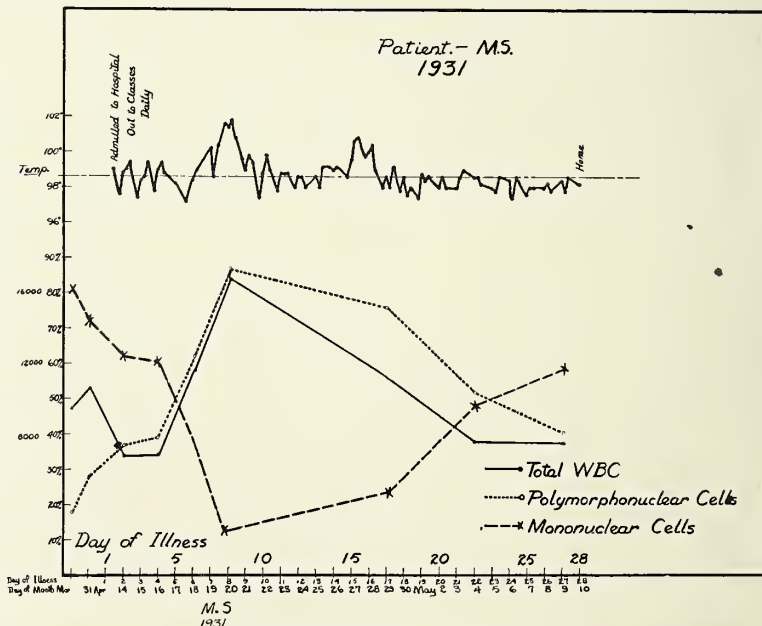
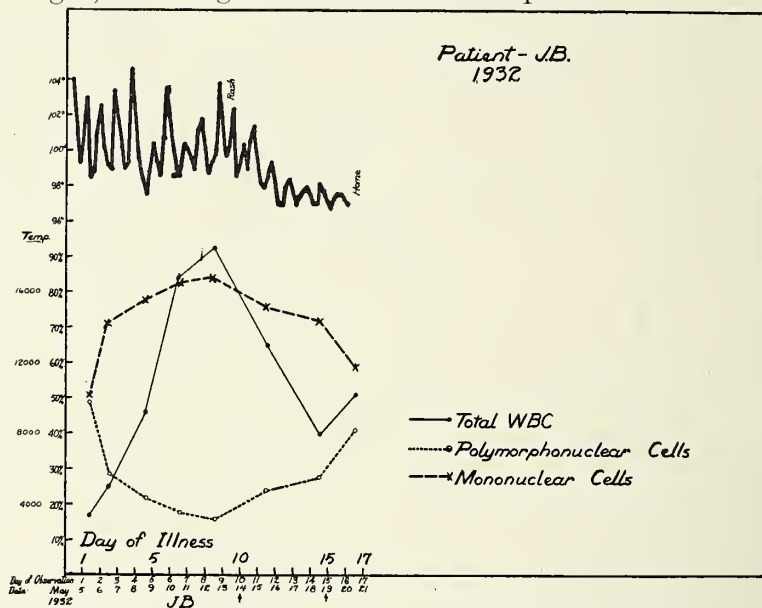
Case 1. E. G. White male age 21 years was seen in the dispensary March 29, 1933, complaining of sore throat, worse in the morning, malaise, slight headache and some nasal congestion starting the preceding day.

The physical examination showed a well developed young man with slight flushing of the face, moderate injection of the nasal mucosa, inflamed pharynx and tonsils, no bleeding of the gums, no exudate on the tonsils or pharyngeal wall, and small anterior cervical glands. The remainder of the examination was negative. The temperature was 98.6 degrees.

March 30 the throat was more deeply injected and he complained of an increased discomfort on swallowing and more lassitude and headache. His temperature was 98.4. March 31 there was a white exudate on the upper pole of the left tonsil, the gums were swollen but did not bleed, the cervical, axillary, epi-

trochlear and inguinal glands were enlarged but not tender, and the spleen was easily palpated. The temperature was 99.4. Smears from the exudate on the left tonsil showed only Vincent's organisms. He was admitted to the Watkins Memorial Hospital.

April 1 the gums bled easily, there was an increase in the size of the cervical glands so that the posterior cervical



Illustrating Onset of Type 1 and a Case of Infectious Mononucleosis With Intercurrent Infection

glands on the left could be seen, and the spleen was tender. The next day he com-

plained of transient earache in both ears with no evidence of drum involvement. April 5 the spleen was larger and could be seen during respiration. April 6 there was marked decrease in the size of all glands except the spleen. He was allowed to go home.

	Apr. 1	Apr. 3	Apr. 4	Apr. 6	Apr. 10
Hemoglobin			80 %		
Red Cells			5,550,000		
White Cells	10,200	8,250	8,600	6,200	7,900
Polymorphonuclears	38 %	32 %	23 %	31 %	45 %
Mononuclears	62 %	68 %	76 %	69 %	55 %

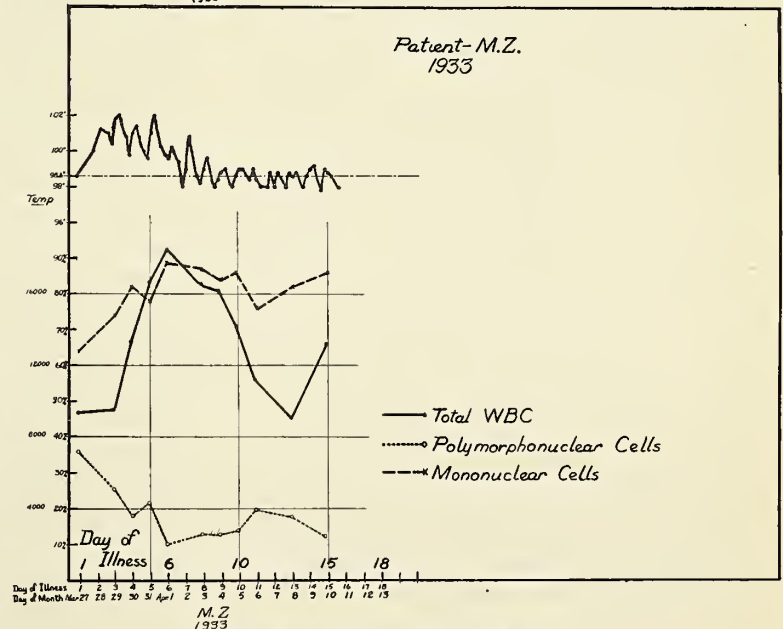
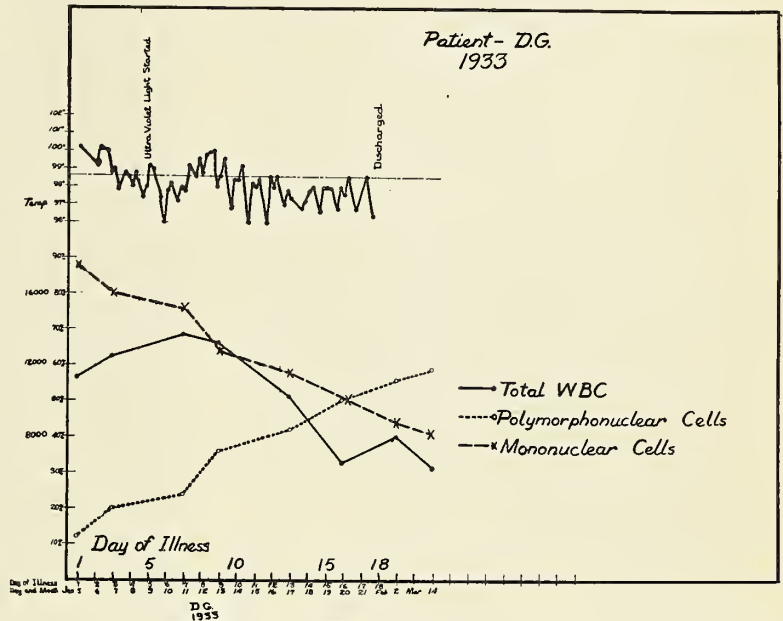
The temperature reached a high mark of 100 degrees on two days and then rapidly subsided to range from 97.4 to 98.8 degrees during the rest of his stay in the hospital. See reports on the blood counts in table above.

Case 2. M. Z. White female age 18, seen in dispensary and admitted to Watkins Memorial Hospital March 28, 1933, with complaint of swollen neck glands and slight cold. For the past five weeks she had what she described as a slight cold manifested by occasional sore throat. About March 23 she noted swelling of the glands on the right side of her neck. The swelling had progressed, the glands became tender and she thought she might have mumps.

The physical examination showed a slender girl, apparently in no acute discomfort, with no abnormal physical findings except visibly enlarged anterior and posterior glands on the right; smaller cervical glands on the left and palpable axillary and inguinal glands. The cervical glands were tender. There was no evidence of swelling of the parotid glands nor redness of the parotid ducts. March 29 there was an increase in the upper cervical adenitis and the epitrochlears were

palpable. March 31 she had a slight epistaxis. The gums, particularly at the site of the unerupted lower third molars, were tender. April 5 the pharynx was slightly inflamed. The glands had decreased in size. The spleen was neither palpable nor tender.

Smears from the gums showed occasional Vincent's organisms. The temperature ranged from 99 to 102 degrees for 7 days and for the next 9 days did



Illustrating Onsets Type 2 and 3

not go above 99.4 degrees. The blood counts follow:

Date	Hbg.	R.B.C.	W.B.C.	% Polys.	% Monos.
March 27	9,400	36	64
March 29	78%	4,530,000	9,550	26	74
March 30	13,000	18	82
March 31	16,650	22	78
April 1	18,500	10	89
April 3	16,600	13	87
April 4	16,150	13	84
April 5	14,100	14	86
April 6	78%	4,730,000	11,150	20	76
April 8	9,100	18	82
April 12	11,200	26	72
April 12	11,200	26	76
April 18	7,300	47	53

Case 3. D. G. White female age 22, admitted to Watkins Memorial Hospital January 5, 1933, with complaints of fever, weakness and fatigue. The preceding November 25 she had a toothache, followed by pain in the right shoulder and relieved by extraction of the tooth. Shortly afterwards she noted gradual loss in weight and thought she had a fever in the afternoons. She was tired continually, slept poorly, perspired at night and had a poor appetite. Some days she felt chilly preceding the afternoon fever. For a week before admission to the hospital she had been checking the afternoon temperature and found it slightly elevated.

The physical examination was singularly negative except for evidence of recent extraction of an upper right second molar, absence of tonsils and moderate enlargement of the right upper anterior cervical glands.

Five days later she complained of sore throat and the posterior pharynx was inflamed. The posterior cervical and left anterior cervical glands were palpable. January 16 the spleen was palpable but not tender. The next day there was an increase in the inflammation of the pharynx and bleeding from the mucosa when a smear was taken. The smear was negative for diphtheroids, Vincent's organisms and streptococci.

The first ten days of hospitalization the temperature ranged from 96.8 in the morning to 99.2 in the afternoon. She was discharged from the hospital January 22 to go home. Following are the reports on the blood counts:

Date	Hbg.	R.B.C.	W.B.C.	% Polys.	% Monos.
January 6	78	4,780,000	11,350	12	88
January 7	...	...	12,450	20	80

January 11	...	...	13,650	24	76
January 13	...	...	13,350	36	64
January 17	...	...	10,300	42	58
January 20	...	...	6,650	50	50
February 2	78	5,400,000	8,000	56	44
February 14	85	5,350,000	6,250	59	41

Case 4. M. T. White male, age 20, admitted to Watkins Memorial Hospital March 8, 1933, with complaints of rapid pulse and chills. The preceding evening after a game of basketball he noticed his heart was beating faster than usual. During the night he had a moderately severe chill followed by perspiration. In the morning his head ached. He had no other complaints.

The physical examination was notably lacking in abnormal findings. The patient appeared to be sick. His face was flushed, the nasal mucosa was very slightly inflamed, there was moderate injection of the pharynx, his tonsils were out, he had no enlarged glands, and the heart examination showed a transient mitral systolic murmur at the apex with a tendency to become less pronounced when the patient sat up.

For the next five days the temperature was normal in the morning and until evening when it would rise slightly. During the night he would have a chill and his temperature then would go up to 103 degrees. Blood cultures were negative for B. typhosus, there was no agglutination for B. abortus and repeated smears were negative for malarial parasites. March 15 there was a small ulcer on the soft palate. March 19 a macular rash appeared on the abdomen and inner thighs. The following day it covered the entire trunk. Schultz-Charlton blanching tests were negative. The entire pharynx was inflamed and there was a heavy post-nasal drainage of mucus. The anterior cervical glands were slightly enlarged. March 22 the rash was fading to a fawn color. The gums were spongy and smears showed the presence of Vincent's organisms. March 24 the spleen was enlarged. April 3 he was discharged from the hospital. The cervical glands were decreased in size but the spleen was still enlarged. Following is a table showing the blood counts:

Date	Hbg.	R.B.C.	W.B.C.	% Polys.	% Monos.
March 9	...	...	5,500	76	24
March 14	80	5,150,000	6,600	60	40
March 15	...	...	6,600	59	41

March 18	.....	8,750	55	45
March 21	75	3,880,000	17,650	38	62
March 24	.....	28,400	16	84
March 25	.....	24,400	24	76
March 28	.....	16,700	30	70
March 30	75	4,880,000	14,300	40	60
April 2	.....	13,250	40	60
April 8	.....	16,400	49	51
April 15	.....	10,100	36	64
April 22	.....	9,800	48	52
May 5	.....	10,400	56	44

DISCUSSION

The ages in this group ranged from 18 to 25 years with the average age between 20 and 21 years. All the patients were university students; 35 males and ten females. The prodromal period varied from one day in four cases to approximately five weeks reported by another. The average time of onset was six days, with 70 per cent dating the first symptoms within the week preceding the acute illness.

The symptoms complained of were numerous. The largest group of patients first noted sore throat, then headache and next swollen glands, fever, chills, malaise, lassitude and weakness. A number complained of painful eyeballs much as occur in true influenza. About as numerous were nasal congestion, cough and dysphagia. Stiff or aching muscles was complained of in 20 per cent of the cases. Insomnia occurred in three of the cases with slow onset. Gastro-intestinal symptoms were present in six cases with anorexia and epigastric distress more common than nausea, vomiting or constipation. There were no cases of onset with nausea and vomiting. Only one case gave a history of epistaxis. Table 1 lists both the symptoms and physical findings in order of frequency.

TABLE 1—SYMPTOMS AND PHYSICAL FINDINGS IN ORDER OF OCCURRENCE

History	Per Cent	Examination	Per Cent
1. Sore throat	68	1. Fever	100
2. Headache	47	2. Adenopathy	109
3. Swollen neck glands	34	Enlarged cervical glands	100
4. Fever	25	spleen	54
5. Chills	20	axillary glands	43
Lassitude	20	inguinal glands	47
Aching muscles	20	epitrochlear	36
6. Malaise	18	liver	18
7. Weakness	16	submaxillary	16
8. Painful eyeballs	11	3. Pharyngitis	79
Cough	11	4. Tonsils: inflamed	56
Nasal cold	11	exudate	6
9. Dysphagia	8	5. Nasal congestion	45
10. Insomnia	6	6. Coated tongue	16
11. Gastrointestinal:			
Anorexia	6	7. Jaundice	11
Epigastric distress	4	8. Epistaxis	11
Nausea	4	9. Rash	11
Constipation	2	10. Conjunctivitis	6
Abdominal pain	2	11. Abdominal tenderness	2
12. Sore gums	4		
13. Epistaxis	2		
Loss of weight	2		
Tachycardia	2		

From the preceding table of physical findings it will be seen that fever and enlarged glands were constant. The order of glandular enlargement was cervical glands, spleen, inguinal, axillary and epitrochlear glands. Adenopathy was present in 90 per cent of the cases at the time of their first examination and in the remaining 10 per cent it appeared within five days. Tenderness of the cervical glands was noted frequently and of the spleen only occasionally. Some type of inflammation of the upper respiratory tract was common, and pharyngitis most frequent. Baldridge²⁸ reports findings very similar to the above. Tidy¹ reported that occasionally there was slight redening of the pharynx. In the reports of cases in more recent years the incidence of pharyngitis appears to be 50 to 80 per cent. Tonsillar involvement alone was less frequent. In only three cases was there a definite exudate which may have been mistaken for a diphtheritic membrane. Jaundice appeared in five cases without marked gastro-intestinal symptoms. In none of these cases was there a history of onset with gastro-intestinal upsets, and in only one was the liver palpably enlarged. Mason¹³ reported a case of jaundice in infectious mononucleosis.

A diffuse macular rash appeared in five cases four to 19 days after onset of the illness. It usually involved the trunk, although in one case it appeared on the face. It faded in 24 to 48 hours and the skin did not scale. The Schultz-Charlton blanching test was negative in the two cases where it was used. Tidy¹ stated that "it may be accepted that there is no eruption associated with glandular fever." Benson,¹³ Spencer²¹ and Longcope¹⁸ reported rashes in cases seen by them.

The duration of observation of our cases varied from two to 55 days, those with the shorter periods of observation being ambulatory patients who either went to their homes or failed to return for further examination. The average duration of the observation period was 18 days and the duration of the acute illness 5 to 14 days. Convalescence is notably prolonged and it may be a mat-

ter of weeks before the patient is restored to usual health and the glands and blood picture are again normal. We have seen no complications such as have been described by some writers. Tidy¹ reported 17 cases of nephritis in 270 cases of glandular fever. Epstein and Damashek²³ reported a case of cerebral symptoms simulating encephalitis complicating a case of glandular fever. Carlson, Brooks and Marshall¹⁰ reported supuration of lymph glands in eight of 79 cases. Davis¹¹ reported relapses in five of nine cases, the relapses occurring in five to 24 days. In only two of our cases were there relapses.

In this series of cases the blood showed slight or no changes in the hemoglobin and number of red cells. There was always a change in the white cells both in number and type. In the early stages of the disease there was sometimes a leukopenia, but by the time the glandular enlargement was well established the total count increased, the average being 10,000 to 14,000. It is not uncommon to have a high white count. In ten cases the white count was 20,000 or above and the highest noted was 38,750. Thirteen had counts below 8,000 during the early part of the illness and in six the count dropped to 8,000 or below during convalescence. Two cases had counts of 3,000 and one of 3,400.

The differential count is constant in the marked and steady shift toward an increase in mononuclear cells at the expense of the polymorphonuclears. In the majority of all counts taken there was an absolute lymphocytosis and in no case did the polymorphonuclear cells exceed the normal number by more than a few hundred and that for only a short time. The lowest percentage of polymorphonuclear cells noted was ten and the highest percentage of mononuclear cells was 89.

Baldrige²⁸ reported in 50 patients an average total white blood count of 10,177 with 48.4 per cent polymorphonuclear neutrophils and 50.2 per cent mononuclear cells. He called attention to an observation on his cases and those of Tidy and Daniels,²⁴ Guthrie and Pessel⁹ and Gilbert and Coleman⁸ that the percentage of mononuclear cells runs higher in spor-

adic than in epidemic cases. He also contends that the blood picture cannot be said to be typical of glandular fever because of the occurrence of absolute lymphocytosis in convalescence from scarlet fever, in whooping cough and in other conditions. According to his observations the increase in mononuclear cells is a response to a lymphoid hyperplasia. Certainly on the basis of blood count alone it might be unsafe to make a diagnosis of infectious mononucleosis but the typical blood picture is an important diagnostic feature along with the glandular enlargement and fever.

The mononuclear cells occur in three main forms, best classified by Longcope¹⁸ as:

1. Small mononuclear leukocytes identical with the small lymphocytes of normal blood.

2. Large mononuclear cells identical with the transitional cells and large mononuclear cells of normal blood, and

3. Mononuclear cells not usually encountered in normal blood.

All the cases here reported made complete recoveries. In one or two instances fatal cases have been reported but the cause of death could not be attributed directly to the glandular fever. In our experience the thing most feared was an intercurrent infection, and for that reason hospitalization was urged. However, in one case (see Plate I) the patient developed scarlet fever during the course of the infectious mononucleosis and immediately there was a return to the normal polymorphonuclear reaction to infection. In spite of the happy outcome in this case we still feel that the patient should be protected against intercurrent infections.

In the early stages of infectious mononucleosis it may be difficult to differentiate from true influenza. In the latter, leukopenia is the rule, lasting through the acute febrile stage. The absence of general glandular enlargement together with the low white blood count through the period of the acute illness would favor the diagnosis of influenza.

In acute lymphatic leukemia the appearance of petechiae, hemorrhages, progressive anemia, a steady downward course, and the presence of many uripre-

lymphocytes in the blood stream would point toward a lymphatic leukemia rather than a glandular fever.

Hodgkin's disease differs from infectious mononucleosis in that the glands are firm and not tender. There is a progressive anemia and an increasing severity of the illness. The leukocytosis is slight.

Dengue fever has been mentioned as one of the diseases which may be confused with glandular fever. Dengue fever is a disease of tropical or sub-tropical climates. Infectious mononucleosis is a disease of the temperate zones, although Hasselmann²⁵ has reported cases from Manila. Dengue fever is characterized by severe onset, pains in the groins and extremities and a leukopenia.

At present there is considerable interest connected with agranulocytic angina. The onset of the disease may be similar to that in one type of infectious mononucleosis but with more severe angina, prostration, less glandular involvement and a low white count.²⁷ A recent series of cases²⁶ gave white blood counts ranging from 300 to 2400 cells with the majority of the cells large lymphocytes.

SUMMARY

A brief resume of our knowledge of infectious mononucleosis or glandular fever has been presented, together with a series of 45 sporadic cases occurring in university students.

The important symptoms in order of occurrence are: sore throat, headache, swollen neck glands, fever, chills and malaise. The physical findings present fever and adenopathy in all cases, and next in importance are pharyngitis, tonsillitis and rhinitis. Rash is not of infrequent occurrence. Jaundice may also occur without marked gastrointestinal symptoms. There is always a change in the differential blood count with an absolute and relative mononucleosis. In the majority of cases the total white blood count is elevated.

The purpose of this paper is not to add anything particularly new but to call attention to the fact that infectious mononucleosis is probably of more frequent occurrence than is reported, and that it is often overlooked or misdiagnosed.

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According to an announcement in the May 6 *Journal of the A.M.A.* several hundred physicians are needed in the development of suitable medical service for the reforestation camps. Physicians desiring service with forestry camps or the army posts and camps engaged in reconditioning the men should make application to the commanding general, Seventh Corps Area, Baird Building, Omaha, Nebr.

FLAVOBACTERIUM ORCHITIDIS

NOBLE P. SHERWOOD, M.D.*

Lawrence, Kansas

On April 3, 1931, I isolated a new organism from the spinal fluid of a treated case of meningitis. It was apparently in pure culture and extensively phagocytized. Bergy has suggested that it be called *Flavobacterium orchitidis*. Its relationship to *B. whitmorii* is being investigated. In February, 1933, Sherwood, Irwin and Marts published a note on its pathogenicity for lower animals. A more detailed description of the organism is as follows:

Morphology: Short rods with rounded ends showing bipolar staining, occurring singly and in short chains. Motile, Gram-negative. Capsulated. No spores produced.

Gelatin stab: crateriform liquefaction—rapid.

Agar colonies: circular, slightly raised, thick, opaque, slightly brown in 72 hours, with somewhat irregular margin.

Glycerine agar slant: thick, mucoid, cream colored.

Broth: turbid with a pellicle.

Litmus milk: coagulation with acid production and peptonization.

Potato: vigorous, slightly brown in 72 hours.

Indol not formed.

Nitrates reduced.

Blood serum liquefied.

Hydrogen sulphide not produced.

Growth on blood agar plates shows hemolysis and methemoglobin.

Acid in dextrose, lactose, maltose, sucrose and mannitol.

Habitat: unknown, isolated from spinal fluid.

Pathogenicity: Quite virulent for guinea pigs and rabbits. Males develop acute orchitis following intravenous inoculation. There is considerable evidence that suggests that a soluble toxin is produced. Focal lesions in liver, spleen, and lungs are also produced.

HUNTINGTON'S CHOREA*

FLORENCE P. CHAPMAN, M.D.

Topeka, Kansas

I wish to present a case of Huntington's Chorea, a chronic hereditary disorder of the nervous system. All cases of this disease have certain symptoms in common, namely, characteristic mental deterioration and motor disturbances. As a rule the onset occurs between the ages of thirty and fifty and the disease runs a progressive course. The illness may extend over a period of fifteen to thirty years ending in exhaustion or being terminated by intercurrent disease. The various elements as the motor unrest and mental disorder and the age of onset do not have the same relation to each other.

The motor disturbances may coincide in onset with the mental symptoms or may follow years later. Motor involvement is slight at first, slowly increasing until after several years it becomes severe. The head and upper extremities are involved first, later almost all voluntary muscles are affected. The eye muscles as a rule escape, or are involved very late in the disease. For a time the motor symptoms can be checked by voluntary effort. Late in the disease all control is lost. The involvement affects groups of muscles, not single muscles, and the movements are of a wide, sweeping, jerking character. Speech is interfered with, due to lack of control of the tongue, and other muscles as well as of the diaphragm. Speech becomes grunting and explosive in character and later, efforts to speak are refrained from as the patient has great difficulty in expressing himself, through lack of control of the muscles. Motor unrest ceases during sleep. There are no sensory changes.

Mental Symptoms: Mental symptoms may precede by years the motor incoordination. In a family afflicted with Huntington's Chorea it is possible at times to predict which child of several is likely to become diseased. Such children are irritable, moody, excitable to a degree, and difficult to manage. They are

*Department of Bacteriology, University of Kansas.

*Read before the meeting of the Shawnee County Medical Society at Topeka, November 7, 1932.

prone to give way to outbursts of temper and rage. They lack control. Changes in character and personality come on before the choreic movements become a prominent part of the picture. The mental deterioration seen in advanced cases may be more apparent than real. The patients have a clear appreciation of their condition. They are suspicious and inclined to be paranoid as are most people who are out of contact with their fellows. They find it increasingly difficult to communicate by speech and it is impossible to write or to read. In time they are unable to walk. Their mood is one of depression which sometimes leads to suicide. Later they become emotionally indifferent.

The age of onset is usually from thirty to fifty years. In the case I am presenting the onset was at a much earlier age and the mental symptoms preceded the choreic movements by several years. The pathology is varied: brain atrophy is usually found over the frontal area and basal ganglia are atrophied. The cause of the motor symptoms is not entirely clear, rubro-thalamo-cortical extensions of the cerebellar pathways are involved. Changes in the lenticular region support these contentions. The pathology is similar to that of paralysis agitans. The disease is one of degeneration and not of inflammatory origin.

As to heredity, only affected individuals transmit the disease. Transmission is through both males and females. There apparently is a tendency to transmit alternately from males to females. The determinants behave as Mendelian dominants. Only a few exceptions to this rule have been noted. A branch once free is always free. The disease does not die out insofar as growing less severe as time goes on. On the contrary each case is as severe as that of the preceding generation and, in addition, is likely to have an earlier onset, as well as the expectancy as to longevity becoming less in succeeding generations. One out of every four offspring escape. A few authorities have noted occasional cases where the heritage seems to have been of a recessive type. It is possible that in these cases the generation thought to be free of the disease may have suffered from an atypical

chorea which has been unrecognized. In the early stages, Huntington's chorea must be differentiated from the psychoneuroses, especially of the hysterical type. Compulsion ties have also been confused. Certain stages of Wilson's Disease (progressive lenticular degeneration) present similar symptoms. In Wilson's Disease there is liver involvement, the disease is recessive in character, and Hebrews are affected. Huntington's Chorea never affects Hebrews. The clear hereditary picture in Huntington's Chorea is an aid in diagnosis. The disease is a clear cut entity and is not found in combination with other heredo-degenerations. The peculiar mental changes, without beginning of motor unrest, at times causes these cases to be diagnosed as schizophrenia. After the symptoms are well developed no mistake in diagnosis is possible.

The patient, G. C., was first admitted to this hospital May 6, 1910. At this time she was 23 years of age. She had twice attempted suicide. She had cried for hours at a time, refusing food and treatment. The patient stated her mental trouble was of two years' duration. She was diagnosed at this time as a psychopath. The comment of the examining physician was as follows:

"The case strikes me as one of unbridled mind. The consequent excesses in action such as might be expected." The patient quieted down after admission and gained control of her emotions. She was discharged as improved in June, 1914. On July 30, 1914, she was admitted for the second time. The step-mother said she could not control the patient at home. She would not stand correction. She was stubborn, sullen, head-strong and gave way to storms of hysterical weeping. She persisted in soliciting the attentions of men. She was again diagnosed as a psychopathic personality. At this time "the muscle tonus was normal. There was no spasm, twitching, athetoid movements nor excess of associated movements and no catalepsy." This is quoted directly from her examination paper at the time of her first admission in 1910. The removal of the patient from the state hospital in 1914 was against the

advice of the physicians in authority. As late as 1921 she is noted as having attended dances and picture shows. When crossed she had violent outbursts of temper with weeping. At other times she was good natured and got along fairly well on the ward. Late in the 20's she began to have motor unrest which has become quite marked. During the past year or two she has been unable to walk. She sits in a chair in a private room. She feeds herself from a tray, dresses and undresses herself. She gets along much better when she is allowed to be alone. In the afternoon she undresses herself and goes to bed. She no longer speaks intelligibly.

The father of this patient, D. C., was admitted to the institution December 27, 1913, aged 65. He was born in France and came to this country with his parents when he was four or five years of age. The cause of his being brought to this hospital was thought, at the time, to be cerebral arteriosclerosis. The patient knew nothing of his ancestry. The onset of his mental trouble is given as three years previous to admission at which time he was 62 years of age. He became delusional believing his wife was trying to kill him. He bought a revolver to protect himself. During the examination it was noted he was highly nervous, irritable and excitable. He told the examiner that his wife was trying to poison him and he wished to have her sent to the penitentiary and that he had purchased a revolver to protect himself. He was in restraint when admitted. He was found to be very stubborn and hard to handle on the ward. At this time a tremor of the fingers was noted. The physician remarked that it was more of a choreiform tic than a real tremor. His co-ordination was impaired. Romberg sign was positive and the deep reflexes were exaggerated. Choreiform movements of the head, arms, and feet were noted. He was then diagnosed as Huntington's Chorea.

An interesting point in the young woman's history is the early age of onset which conforms with the rule that the illness comes on earlier in succeeding generations. Equally interesting is the long period of time which elapsed be-

tween the onset of the mental symptoms and the beginning of motor incoordination. She also showed the characteristic temperament previous to actual psychotic symptoms. The onset in the father's case was at about the age of 62 years. At this period of life it was natural for the physician to believe that his irritability and his highly nervous and excitable condition was due to arteriosclerosis and it was not until the choreiform movements of the head, arms and feet were noted that a diagnosis of Huntington's Chorea was made. The motor incoordination was not severe as the man could still write. As this man came to this country in his infancy from France, no history was available, and the hereditary character of his illness was not known.

—R—

J. E. MINNEY, M.D.

Dr. J. E. Minney died April 10 at Altadena, California, where he had made his home for the past twelve years. He was born at Rinard Mills, Monroe County, Ohio, March 14, 1846, and reared by his grandparents who owned the Mills, his mother having died when he was but twelve days old. He learned milling, but the flour dust brought on bronchial trouble, and he turned his activities toward school teaching.

Dr. Minney married Elizabeth Jane Wilson at Marietta, Ohio, September 3, 1869. His family consists of a wife and three children; three grandchildren and four great grandchildren. His oldest son Ernest W. Minney lives at Long Beach, his second son George M. Minney at Rosemead, and his daughter, Sarah B., is the wife of R. M. Fulton of Pasadena, California.

He moved from Ohio to Kansas in 1871, locating in Jefferson County where he taught three terms of school, and in March, 1872, moved to Parkerville, Morris County, Kansas. After teaching in the Parkerville school that summer, he was in the fall elected County Superintendent of Public Schools of Morris County on the "Greeley" ticket, and was re-elected in 1874. He began the study of medicine in 1876, graduating in 1880, and located at Columbus, Kansas,

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Renal Tuberculosis*

ARTHUR L. OSBORN, M.D.†

In this presentation, I will attempt to bring together the main concepts and essential points as briefly as possible and to focus your attention on the most nearly proven facts; those that would seem to offer assistance to us in daily practice. Most nearly proven, I say, for as Wildboltz remarked not long ago, "The diagnosis of renal tuberculosis is more difficult now than it was when it was all settled several years ago."

While renal diseases, for example stone, were known before the Christian era, tuberculosis of this organ was discovered only 150 years ago, while Peters in 1872 did the first nephrectomy. In 1883, the tubercle bacillus was first found in the urine. Steintal, in 1885, in a series of 24 autopsies of patients dying with urinary tract tuberculosis found the kidney involved in all of them and the bladder in only twelve. This showed the bladder as secondarily involved and advanced the idea of renal surgery as a curative measure. In those early days nephrotomy rather than nephrectomy was the operation of choice.

Regarding the avenue of entry of tubercle bacilli into the urine many theories have been accepted, later to be discarded. The earlier belief was that a normal healthy kidney could excrete or filter through its glomeruli the tubercle bacilli. In other words, a pulmonary focus might break down and discharge organisms into the circulation and these in turn be filtered through the kidneys and the latter remain perfectly healthy. Naturally, if this were true, the finding of tubercle bacilli in the catheterized kidney specimen would be of no significance whatsoever in indicating renal pathology.

As early as 1886, workers refuted the above statements and advanced the idea that in every case of bacilluria an actual

inflammatory lesion was present. In 1924 this was definitely proved by Medlar in his extensive studies on guinea pigs and rabbits. The lesion may be microscopic and require serial section to show it but this has been demonstrated in many operating rooms. The surgeon condemns the pathologist for causing him to remove a normal kidney on the basis of animal inoculation. A little later the laboratory triumphantly reports a tubercle and the old friendship is renewed.

As for the old textbook teachings of four possible portals of entry: 1. direct invasion; 2. ascending from bladder; 3. lymphatic, and 4. blood stream. Direct invasion is possible but extremely rare. Ascending infection has not been proved to occur by itself. If tubercle bacilli are injected into renal tissue, experimentally, bladder tuberculosis will follow, but not the reverse, if the organisms are introduced into the bladder. In other words, urinary infection follows the course of excretion. The lymphatic entry is difficult to accept because all the lymph channels flow from the kidney. Authorities are practically agreed that renal tuberculosis may be considered a blood stream infection. The point is raised that if the germs are blood borne, the bilateral cases would be much more numerous as both kidneys are exposed alike. However, isn't it so that in staphylococcal bacteremia, for example, unilateral embolic renal abscesses are more frequent than bilateral?

The pathology of renal tuberculosis is the same as the reaction of tissue elsewhere in the body. The point of localization of the bacilli is usually the papilla adjacent to the mucous membrane of the secondary calices. The explanation of this is that the circulation of blood is slowest at this point. Incidentally, this gives us the reason why severe hematuria may be the first signal of a tuberculosis, for ulceration through the mucous membrane of the calyx is not unusual. A simple classification of the lesion is that of Randall: 1. miliary; 2. closed, and 3. open or ulcerative. The miliary form is of no interest, clinically, and occurs as a part of a generalized condition. The closed lesions are those

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*Read before the Clay County Medical Society, February 16, 1933, at Clay Center, Kansas.

entirely within the kidney substance while the open or ulcerative types are near the calyx and open into it. Naturally it follows that the nearer the papilla and calyx the caseous lesion occurs, the more rapid is the decrease in kidney function.

The general symptoms of malaise with afternoon fever, usually precede the diagnosis of renal tuberculosis. The local symptoms are in 75 per cent of the cases referable to the bladder and not to the kidney at all. Frequency and urgency are usually the first complaints. The frequency has come on gradually over a period of months and has been noticed both day and night. After several months, pain in the bladder neck region, during or after urination, occurs. This may become a frank tenesmus with passage of a few drops of blood.

In about 5 per cent or 6 per cent of cases, gross hematuria is the initial symptom. Careful questioning will elicit coexisting pain comparable to the passage of a ureteral calculus and due to the expulsion from the ureter of worm-like clots of blood. The patient may tell of symptoms as dull pain over the renal areas, fever and chills, or tenderness on pressure over the lumbar region. Such a story tells little to aid us in a differential way.

Another patient may say that he has noticed a mass in one kidney region. Palpation may reveal an enlarged kidney but this again, tells nothing definite. The pathology may be all on the opposite side, even to the point of a tuberculous auto-nephrectomy, and the mass may be the good kidney, simply demonstrating the possibility of compensatory hypertrophy.

The keystone in the arch of our diagnosis is of course, the guinea pig. Any hospital now-a-days is able to provide a pig but strange to say, they are not all able to keep the same tag on the same pig for six consecutive weeks. Just a revival of the old saying, "a chain is no stronger than its weakest link." Before any further urological study is made in a suspected case of urinary tract tuberculosis, a pig should be inoculated with a catheterized bladder urine, together

with daily acid fast stains of sediment.

A plain K. U. B. film (which, by the way, should be routine in all urological cases of whatever nature) may offer a fairly accurate diagnosis. Calcification of old processes within the parenchyma of the kidney often times are visualized.

The comparative recent introduction of intravenous urography finds, I believe, its chief use in cases of tuberculosis. The old hazard, however, is to be mounted, namely, that a poorly functioning kidney will give a corresponding poor visualization of the pelvis. Wesson, not long ago, called attention to the perfect outline of parenchyma with no filling at all of pelvis or ureter as an aid in diagnosis of tuberculosis, associated with a fibrotic occlusion of the ureter.

Now, to pass on to cystoscopy, the tubercular bladder is always contracted, the degree depending upon the severity of infection. This is probably not due to actual pathology but rather, to a toxic substance in the tuberculous urine which irritates the epithelium and by way of sensory nerve stimulation, sets up the reflex to void. Instead of a normal capacity of 500 cc. these bladders will hold only 100 to 150 cc., perhaps less. In advanced stages when ulceration near the vesical outlet occurs, it is not so difficult to explain the frequency. In such cases, anaesthesia is necessary to carry out examination. Tubercles, if present, are usually found about one ureteral orifice or on the posterior bladder wall.

In this connection, it is well to call to your attention that in the cases of complete occlusion of ureter of the tuberculous side, the bladder may be perfectly normal. Careful study of the ureteral orifices is important. Notice is taken of the jet as to turbidity or redness. The motility of the ureter is watched and the so-called "golf-hole" ureter with a pulling up of that side of trigone with deep breathing is very suggestive of renal tuberculosis. The cause of this of course, is the shortening of the ureter from fibrosis. At this time the intravenous use of indigo-carmin will often show a marked delay in appearance time and a poor concentration on the suspected side.

The next step is ureteral catheterization

and collection of individual specimens for inoculation and smears.

The technique of this, I shall pass over with this word: There is a difference in opinion among urologists as to dangers of infecting a healthy kidney by passing catheters and making pyelograms. Personally, I believe no harm need befall the kidney providing small catheters are used and are carefully passed. I believe the additional information derived is of more importance than the danger of infecting the kidney.

The finding of pus without organisms in a renal specimen is strongly suggestive of tuberculosis. After secondary infection has occurred, however, this is of no value whatever. In regard to finding of organisms, it must be borne in mind they are not thrown out constantly but in showers and that is why repeated studies are necessary and why one pig may be negative and the next positive or vice versa. The real value of the pig test, like a Wassermann, lies in the positives. Thomas reported that in 1,500 pig tests, he had not found a single false positive.

The pyelogram is very important, both in telling us the condition of the infected side as well as the sound side. If a good visualization is obtained by intravenous urography, all well and good. If any doubt exists it is quite harmless and easy to obtain good retrograde pictures (using intravenous media) while the catheters are in place for collection of specimens. I have already mentioned the presence of calcification as a diagnostic aid. The outline of the pyelogram itself may tell us by a "moth-eaten" or "feathery" calyx, the location of the ulceration. A "beaded ureter," that is one with alternate areas of scar and normal tissue, often clinches the diagnosis. Foley uses another finding in a diagnostic way, that is, the "splinting" of the pelvic ureter or a loss of the normal curve of the lower one-third and in its place an uncurved channel.

Last but not least, a picture showing partial or complete auto-nephrectomy is very indicative of tuberculosis.

The tuberculin reaction as a diagnostic

aid, I think has been pretty well discarded. Most adults will give enough of a positive reaction to make a conclusion unreliable.

The treatment of renal tuberculosis is quite a bone of contention. First we must agree as to which type we are referring. Passing the miliary type, we are left with the open or ulcerative type. The treatment of choice is nephrectomy, in my opinion, in the unilateral cases, and even in bilateral cases, in which there is considerable bleeding from one side. Kelly is a strong advocate against partial nephrectomy or conservative surgery, citing many cases which were reopened and the kidney found to be entirely destroyed by tuberculosis.

The coming into use of spinal anaesthesia has been a boon to operations for renal tuberculosis. The decreased chance of dissemination of pulmonary foci is most welcome.

In the closed types and bilateral cases, I believe the treatment should be non-surgical; rest, meaning absolute rest, not allowing bathroom or table privileges, together with a proper diet, and heliotherapy are all necessary items. The dry air of Arizona or New Mexico is ideal for ultraviolet radiation.

I consider it unwise in the surgical cases to allow the patient to leave the hospital and go about his usual duties at once. A year or fifteen months of rest and heliotherapy is needed to assure the best prognosis. If Medlar's teaching that all cases are bilateral is accepted, then is this especially true. The solitary kidney needs every possible aid in throwing off its infection.

In conclusion, I only want to re-emphasize the statement that 75 per cent of people coming to a physician with renal tuberculosis, complain of bladder symptoms and not kidney. A patient presenting himself for relief of frequency and burning of long standing and who is particularly intolerant of silver irrigations, is not receiving proper consideration until renal tuberculosis is ruled out. In the open, ulcerative unilateral lesions, a nephrectomy should be done and the bladder will clear up by itself.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

Tuberculosis in the American Negro with its high mortality rate is an urgent problem. The literature dealing with this subject has much to say as to the presence or absence of a racial susceptibility of the Negro to this disease. Many of the theories advanced, however, rest on conjectural rather than factual evidence, and there is a notable lack of definite clinical and pathological data.

Pinner and Kasper compared and reported the postmortem findings in 303 Negro and 219 white patients dead of tuberculosis. The study not only points out certain significant differences between the two races, but also throws light on the pathogenesis of tuberculosis in general. An abstract of the article follows.

Tuberculosis in the Negro

The authors were impressed by apparently significant differences between colored and white patients dead of tuberculosis and decided to replace their impressions by carefully collected data. It has been shown that the most significant factor in the development of tuberculosis is the propagation of lesions within the body, and that one of the most important and probably the only definitely established fact about immunity is the diminution of spread of reinfecting bacilli in a sensitized organism as compared with a non-allergic one. A comparison of white and colored patients dead of tuberculosis as to the relative frequency of lymphatic and haematogenous spread (paying particular attention to the type and extent of metastases) was deemed to be of value in that it would indicate with fair reliability the degree of resistance during life. Some of the more notable findings are as follows:

MILIARY TUBERCULOSIS

Miliary tuberculosis was found at least twenty per cent more frequently in the Negro in every decade of life up to 50 and this is believed to be indicative of a low level of resistance. However, since on the other hand it may indicate nothing

more than a mechanical accident, all cases of miliary tuberculosis are excluded from further consideration, and the remaining data deal with 190 Negroes and 185 whites.

HAEMATOGENOUS SPREAD

Pointing out that the the absence of metastases does not mean that blood stream invasion has not occurred but may rather denote the degree of resistance (specific or non-specific) to such spread, the authors observe that haematogenous propagation occurs twice as often in the Negroes as in the whites, only grossly visible lesions being taken into account.

LYMPHATIC SPREAD

From the point of view of resistance, spread via the lymphatics regularly occurs following first focalization and indicates presumably that state of resistance which is characteristic of "virgin soil."

Eliminating all calcified foci in lymph nodes since they might be part of the primary complex and taking into consideration only grossly visible lesions, spread via the lymphatics occurred nearly seven times as frequently in the colored as in the white group.

ISOLATED PHTHISIS

In contrast to the foregoing is the occurrence of isolated phthisis or tuberculous disease of one organic system with no evidence of involvement of distant organs, and which would presumably indicate a high degree of resistance.

This type of lesion was present in nearly half the white patients and less than 3 per cent of the Negroes.

DURATION OF DISEASE

This information which was available for 96 whites and 47 Negroes gave a total average for Negroes of 324 days and for whites 995 days.

The authors were aware that the nature of their material (postmortem) imposes limitations, since the differences noted between the two races are probably more pronounced on the postmortem table than in a sanatorium, and more definitely there than in an ambulant clinic. Nevertheless they feel that the material presented justifies some rather

definite conclusions. In summary they find that the differences between Negroes and whites are as follows:

"The Negro shows much more frequently haematogenous and lymphogenous spread after a definite focus of tuberculosis is established; this tendency is indicated, too, by the fact that miliary tuberculosis is greatly more frequent in the Negro at all ages. His foci are more frequently exudative in nature, they are more frequently massive, and more often surrounded by collateral infiltrations or haemorrhagic zones. The most conspicuous of the differences is the much greater tendency to lymphatic involvement. The Negro exhibits at times a predominantly lymphatic involvement, which is an exceedingly rare occurrence in white adults. A generalized nodular tuberculosis occurs in some instances in Negroes which is hardly ever seen in whites. In addition, tuberculous lesions in the Negro perforate more often than in whites."

These pathological peculiarities in the Negro are submitted as proof of a diminished resistance.

VARIOUS THEORIES ANALYZED

Several writers have offered explanations to account for the lower resistance of the Negro:

a) *It is said that the Negro, having been in contact with tuberculosis for a much briefer time than the white has not as yet had an opportunity to acquire the same measure of "inherited immunity."*

The authors reply that this stands on unsafe ground since a true inheritance of acquired immunity has never been demonstrated.

b) *It is said that the Negro escapes childhood infection more frequently than the whites; therefore, an infection acquired later in life occurs in virgin (non-allergic) soil and produces rapidly progressive "childhood type" tuberculosis.*

The authors point to the results of large surveys, notably those of Opie and Aronson, which indicate clearly that this theory must be abandoned.

c) *It is alleged that the apparent differences are due to environmental con-*

ditions and to the mental attitude of the Negro in regard to disease.

The authors comment that undoubtedly the greater opportunity for infection in crowded, unsanitary quarters from many undiagnosed cases of open tuberculosis is probably one of the most important factors causing the high tuberculosis incidence in the Negro, but it is difficult to see how environmental conditions contribute to the qualitative peculiarities in Negroes. When unfavorable living conditions in Germany sent the tuberculosis mortality soaring, no reports came forth to tell of qualitative changes in the course and in the anatomical character of the disease.

d) *It is suggested that there exists a true racial difference between the two races, which confers high resistance on one and low resistance on the other race.*

This hypothesis recommends itself strongly to the authors because of the apparent impossibility of explaining the matter by any other alternative, and while this does not constitute proof, it seems at the present time the logical postulate and further studies should show whether it can be converted into an actual fact.

They would deplore violent attacks against such a theory on the ground that its acceptance might paralyze campaign measures now in use.

Pathological Peculiarities of Tuberculosis in the American Negro, Max Pinner and Joseph A. Kasper, Am. Rev. of Tuberc., Nov. 1932.

—R—

Horlick's Malted Milk Acceptance Withdrawn.—The Committee on Foods reports that the container label and advertising for Horlick's Malted Milk present explicit infant feeding formulas for infants aged from 1 week to 12 months. The manufacturer, Horlick's Malted Milk Corporation, was informed that the promulgation of feeding formulas in lay advertising is considered to be in conflict with the best experience, authoritative judgment and basic principles in infant feeding, and that the feeding of an infant by routine feeding formulas and instructions distributed by food manufacturers, or according to directions, printed materials, or advice of any person other than the attending physician, may seriously endanger the health of the infant. The manufacturer expressed himself as unwilling to remove the feeding formulas from advertising addressed to the public for merchandising reasons. The acceptance of Horlick's Malted Milk is withdrawn and the product will no longer be listed among the Committee's accepted foods. (Jour. A.M.A., April 15, 1933, p. 1175.)

LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

Am glad to know you survived the terrible ordeal of the initiation of 3.2 beer. So far as we could see your letter was that of a sober individual and the even tenor of your work did not seem especially disturbed. Your mother had many misgivings concerning the young people, and I think had visions of you and your younger brother eating a half dozen pretzels, drinking a glass of 3.2 and then running amuck. I tried to assure her that the glamour of paying 10 and 15 cents for a small glass of beer would soon wear off; in fact, your allowance would not permit an extended orgy of pretzel eating. Personally, I could not bring myself to believe that the nation would go to the bow wows as a result of this innovation. The individual who would be ruined by weak beer could also be ruined by ginger ale, coca cola, or mince pie. Inasmuch as all men are born free and equal and supposedly with a minimum amount of brains it is a natural deduction that we are given the latter for a purpose. The fellow worth saving is not going to make a pig of himself simply because he has access to the makings. Personally I have a curiosity almost a hankering for a glass of good beer but located as we are 350 miles from the port of entry I can see no immediate prospect for the gratification of this unholy desire unless some criminal friend should risk the penitentiary and bring me a bottle. Should this happen I would lock the doors, quietly sit me down, make a cheese sandwich and sip my brew. And if this be the muttering of a gastronomic pervert, let the authorities do their worst. I would much rather you boys would indulge in a sanitary brew of this kind than to drink the omnipresent yeasty, sour concoction called home brew. This abomination of high alcoholic content which usually has about two inches of goo in the bottom of the bottle is not fit for man or beast. And the spiked article that has been so carefully thumbled is not much better for

the reason it is next to impossible to get a good grade of wood alcohol. You will admit I have covered the liquor subject pretty thoroughly and to sum it all up no one can advise you. If you received the quota of intelligence to which you were eugenically entitled, you will handle the problem for yourself and in a satisfactory way.

I note you are now getting more or less clinical work and are having a chance of seeing the boys do their stuff on live people. This you will find more interesting than frog and fish worm research. You will also get a more correct appraisal of the ability of your instructors. You will be amazed at the insight of your fellow students who will size up every man on the staff after an observation of two or three days. That is they will do this if they run true to form of the student of my day. We openly made fun of the plodding uninteresting teacher who was so interested in his work he failed to put it over in an attractive way. It is not difficult forty years later to appreciate this type, but at that age the show boy carried off the applause. We openly admired the temperamental individual who while operating would throw an instrument on the floor and bawl out a poor little nurse who was taking her first turn in the operating room. I now realize he was a selfish individual who probably was mixed up on his anatomy at the moment, and his alibi complex took refuge in jumping on an inoffensive nurse. I have seen a number of these surgeon maniacs carry on in operating rooms and they have long since failed to impress me except unfavorably. And I might add I have never seen a high class surgeon who couldn't control his temper to a reasonable extent. I have never had the least desire to have one of these temperamental birds working on my insides. I would be afraid he would in one of his manic episodes seize my colon or spleen and tear it out by the roots. So I advise you if at any time in your future work, you find yourself becoming nervous, hypercritical, or frenzied, lay aside your scalpel, catheter, or other working tool and go to some good clinic and improve your technique.

I attended our state medical meeting and renewed acquaintanceship with the old boys. The year has not wrought a great change in most of them; some are possibly a bit more stooped and possibly gaze a little longer through the bifocals before there is complete recognition. About the same number dropped off to sleep during the reading of technical papers, and the same reluctance to stop visiting and start the program was evidenced. Young men fresh in the work dutifully took notes and conscientiously stored away knowledge for future use. I listened to our visiting notables through lengthy addresses embellished by lantern slides and statistics but am ashamed to admit I enjoyed my visits with Basham, Lindsay and the other old boys much more.

Sometime when Roosevelt has handled the other great problems of the hour I hope he will take up the subject of statistics and questionnaires. No doubt they are necessary in some instances, but I am free to confess nothing will lull me off to sleep so quickly and peacefully as six slides of statistics half of them upside down. As to questionnaires no one seems to know who invented them, but sooner or later an outraged public will rise up and demand relief.

It wasn't necessary for you to telephone asking if I won the cup at the golf tournament. This only added 50 cents to my expense and humiliated me besides. The only excuse I have to offer is I was hurried for time and failed to get a shave before the game. This is not a very good alibi but probably on a par with that of most golfers. Your brother Dave was foot loose as usual and managed to find some friends to take to dinner with us, and attend the movies. I think he had a cramp in his hand as he found it impossible to get his pocket book out at the critical time. In spite of the fact he criticized my hat, haircut, and general bucolic make up, I enjoyed him and his sophisticated young friends.

Love,

DAD.

PROCEEDINGS OF SEVENTY-FIFTH ANNUAL MEETING

Lawrence, Kansas, Memorial Union Building, Tuesday, Wednesday and Thursday, May 2, 3 and 4, 1933

MEETING OF THE HOUSE OF DELEGATES

The House of Delegates met in the Ball Room, second floor, Memorial Union Building, on May 2. The meeting was called to order by the President, Dr. J. D. Colt, Sr., at 8:10 p. m.

On motion by the secretary regularly made, seconded and carried, the minutes of the 1932 meeting were not read, having previously been published in THE JOURNAL.

SECRETARY'S REPORT

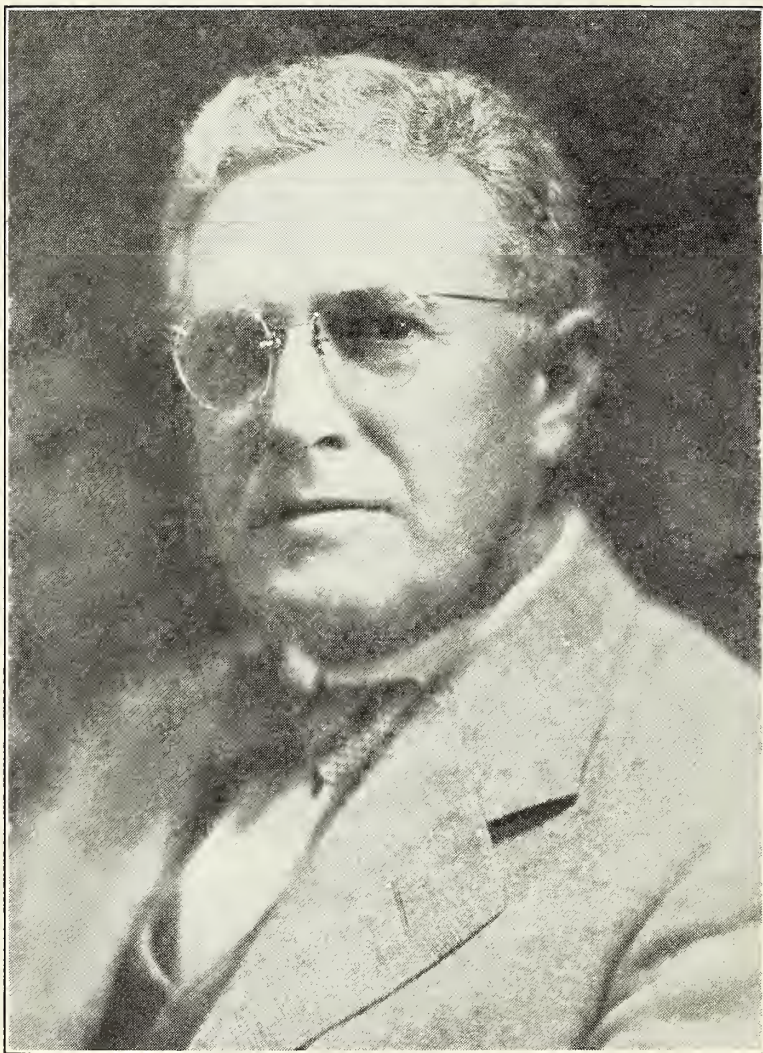
To the House of Delegates of the Kansas Medical Society the following report is respectfully submitted:

FINANCIAL REPORT

Balance on hand May 1, 1932:	
Medical Defense	\$10,896.71
General Fund	8,051.16
	<hr/>
	\$18,947.87
Cash received from all sources for the year ending May 1, 1933:	
Dues from members	\$ 8,442.00
Interest reported by treasurer..	351.25
	<hr/>
	\$ 8,793.25
	<hr/>
	\$27,741.12
Expended for the year ending May 1, 1933:	
Medical Defense	\$ 1,583.60
Gov. tax on checks reported by treasurer .....	.26
General fund	8,477.38
Gov. tax on checks reported by treasurer .....	.82
Gov. tax on checks office of secretary .....	.04
	<hr/>
	\$10,062.10
	<hr/>
Balance on hand May 1, 1933.....	\$17,679.02
Standing of funds May 1, 1933:	
Medical Defense	\$11,724.85
General Fund	5,954.17
	<hr/>
	\$17,679.02

This report may not seem as encouraging as the reports of previous years but yet when we consider the unprecedented economic condition of the world how every line of business and every phase of society has been affected by this condition we really have no great cause for complaint or discouragement.

Due to the business depression and financial crisis through which the country has been passing since 1929 there has



WILLIAM F. BOWEN, M.D., TOPEKA
President-Elect Kansas Medical Society, 1933

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

ASSOCIATE EDITORS—R. T. NICHOLS, L. B. SPAKE, E. C. DUNCAN, O. P. DAVIS, J. T. AXTELL, H. N. TIHEN, C. C. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

Subscription Rates: \$2.00 per year. 20c single copy.
Advertising rates furnished promptly on application.

LIST OF OFFICERS—President, J. D. Colt, Sr., Manhattan; Vice President, J. F. Gsell, Wichita; Secretary, J. F. Hassig, Kansas City; Treasurer, Geo. M. Gray, Kansas City.

COUNCILORS—First District, R. T. Nichols, Hiawatha; Second District, L. B. Spake, Kansas City; Third District, E. C. Duncan, Fredonia; Fourth District, O. P. Davis, Topeka; Fifth District, J. T. Axtell, Newton; Sixth District, H. N. Tihen, Wichita; Seventh District, C. C. Stillman, Morганville; Eighth District, Alfred O'Donnell, Ellsworth; Ninth District, H. O. Hardesty, Jennings; Tenth District, I. B. Parker, Hill City; Eleventh District, C. H. Ewing, Larned; Twelfth District, W. F. Fee, Meade.

The Journal of the Kansas Medical Society is not responsible for statements, methods or conclusions presented in any article other than by the editorial staff.

Authors will submit copy, typewritten on standard size paper and double spaced. Copy not prepared in this manner will be returned, if convenient. THE COST OF ILLUSTRATIONS WILL BE DEFRAYED BY THE AUTHOR.

EDITORIAL

THE SEVENTY-FIFTH ANNUAL MEETING

The Seventy-Fifth Annual Meeting was one of the most successful meetings of recent years. Despite economic conditions, some 380 members registered, or approximately 27 per cent of the membership of the society. However, the total enrollment was 512, including some 120 university medical students, who were granted not only the privilege of registration but attendance of all the scientific sessions.

The general program met with universal satisfaction. With one exception, the papers, as scheduled, were presented. The intense interest was evidenced by the discussion which followed each essayist's presentation. The guest speakers, including Dr. Dean Lewis, President-elect of the American Medical Association;

Chancellor Lindley of the University of Kansas, and four other men distinguished in their particular specialty met with unqualified approval.

The two meetings of the House of Delegates required much time. The Tuesday evening session was given over to the reports of the officers, Councilors, Defense Board and committees. There was considerable discussion in regard to reducing the dues, but the proposal was defeated by two votes.

The recommendation of the Cancer Committee to invite the American Society for the Control of Cancer to make a survey in the state was approved by unanimous vote. It was emphasized by Dr. Nesselrode and other members of the committee the survey would be made by the national society only on invitation by and in cooperation with the Kansas Medical Society. Local studies will be in cooperation with the local medical society. Final report with recommendations will be made to the state society.

The proposal to employ a full-time lay executive secretary was the cause of much discussion at the Thursday morning session, but was lost on vote. However, provision was made for a referendum on the question in the near future.

The exhibits commanded the attention of all. They were of two types: scientific and commercial. The scientific exhibit first undertaken at the Kansas City meeting last year, was appreciated all the more this year because of the various phases of medicine which it covered.

The annual banquet held in the large dining room of the Memorial Union Building was a delightful occasion. Visiting guests were introduced by President Colt. Short talks were made by Dr. Lewis and W. W. Davis, Professor of History at the University. Dancing followed the program.

Officers elected included: William F. Bowen, president-elect, Topeka; H. L. Chambers, Lawrence, vice president, and George M. Gray, Kansas City, treasurer, (re-elected). J. D. Colt, Sr., was elected delegate to the meeting of the American Medical Association. R. T. Nichols, Hiawatha, C. C. Stillman, Morganville, and A. E. O'Donnell, Ellsworth, were re-elected as Councilors of the first, seventh and eighth districts, respectively. L. F. Barney, Kansas City, was elected as Councilor for the second district, succeeding L. B. Spake, Kansas City.

The president-elect is honored and well-known throughout the state. Dr. Bowen was born in Wamego, Pottawatomie County, Kansas. His medical education was gained in the Kansas Medical College, receiving his degree with the class of 1898. He is a past-president of the Shawnee County Medical Society; a member of the Golden Belt Medical Society, of the American Medical Association and a Fellow of the American College of Surgeons. As Captain in the Medical Corps during the World War, he was stationed at the Base Hospital, Camp Sherman, Ohio. He is at present, and has been for a number of years, Chief of Staff, Christ's Hospital, Topeka. His wide acquaintanceship and his knowledge of medical affairs well fit him to serve the society as president during the year 1934.

Two proposed amendments to the constitution were introduced at the Tuesday evening session of the House of Delegates. One amendment would limit the term of service of Councilors to six consecutive years; the other would provide for the election of a Councilor at the annual meeting by the delegates from that particular councilor district.

The Woman's Auxiliary had a varied program, combining business with pleasure. Mrs. E. J. Nodurft is president

of the Auxiliary. Officers elected included: president-elect, Mrs. W. G. Emery, Hiawatha; vice president, Mrs. L. B. Gloyne, Kansas City; secretary, Mrs. M. O. Nyberg, Wichita, and Mrs. Alfred O'Donnell, Ellsworth, treasurer.

The Douglas County Medical Society proved to be an ideal host. No detail was overlooked to assure the comfort and entertainment of the visitors.

The proceedings of the House of Delegates as reported by the secretary will appear in this and succeeding issues of the JOURNAL.

The 1934 meeting will be held in Wichita.

ANNUAL REGISTRATION

In accordance with the provisions of House Bill No. 431, enacted by the 1933 legislature, all physicians who have been licensed by the Board of Medical Registration and Examination are required to register annually if they wish to continue the practice of medicine in the State of Kansas. Registration must be made between July 1 and October 1. In the event registration is not made by October 1, the secretary is required to strike the name of the holder of the certificate from the register. However, the certificate may be renewed by payment of a fee of five dollars.

Forms have been prepared by the board and will be mailed in the near future to each physician licensed, and to the address which is recorded in the office of the secretary. In case the forms are not received by August 1, notification should be made by the physician to the secretary, Dr. C. H. Ewing, Larned.

The enactment of an annual registration law is of distinct advantage not only to the physicians but to the public as well. It is believed a number of physicians are located and practicing in the

state who have never been licensed. As a matter of fact, but a short time ago, one physician was discovered who, although not licensed, had practiced in the state for approximately ten months in two different locations and had gained admission to the local county medical society.

Through annual registration it will be possible to determine who is actually licensed to practice in the state. The medical practice act makes no provision for exemption of non-licensed practitioners, except those physicians who may be called in consultation. A heavy penalty is provided for those who violate the medical practice act.

In addition to providing additional funds for enforcement of the medical practice act, funds will be available for publishing a directory of licensed physicians. Each physician should be provided with a copy, as well as the county attorneys of the many counties. If a physician locates in a community, reference to the directory will determine if he is licensed; if not, prompt notification should be made to the secretary of the board.

Physicians should give their hearty cooperation to the officers and members of the Board of Medical Registration and Examination in complying with the provisions of the annual registration law.

JOURNAL ADVERTISERS

Under present economic conditions, business of every type is forced to carefully check its expenditures. Disbursements for any purpose may continue so long as the income from that source exceeds or equals the expenditures. If disbursements exceed the income, there must necessarily be curtailments. This is especially true of advertising and it usually is one of the first items to be eliminated.

A medical journal is naturally limited in the amount of advertising it may use. During the past several months, many advertisers have found it necessary to curtail the space used in this JOURNAL, and in some instances entirely discontinued advertising. It was with the idea of retaining regular advertisers and also to secure new ones, that the Council at its mid-winter meeting adopted the resolution urging readers of this JOURNAL to patronize the many different companies using its advertising columns.

In the March, 1933, number of the Kentucky Medical Journal, editorial comment was made on medical journal advertising as follows:

"Our advertisers have really been paying for the JOURNAL since its inception. It has never cost the physicians of the State a penny, although we have never failed as yet to publish any article or report submitted, which possessed any real worth. This has been made possible solely by the volume of advertising secured.

"During the years of prosperity we did not increase our advertising rates; so, in these days of adversity, we can not reduce them without correspondingly reducing space available for reading matter.

"We are, therefore, urging all member physicians to read the advertising pages of the JOURNAL and to give their patronage, wherever and whenever practicable, to the dealers and manufacturers who have so generously supported our publication. It is only through such patronage of our advertisers by members of the profession that we can hope to continue the JOURNAL in its present size and, so, be able to take care of all the worthwhile material submitted for publication."

HOSPITAL INSURANCE

The report of the Committee on the Costs of Medical Care has stimulated many plans of hospital insurance. The report shows that hospital services often

represent the largest item in the cost of medical care; that this often comes unexpectedly and often seriously cripples a family's finances. The report recommends the use of some form of hospital insurance to provide for such an emergency and to distribute this expense over a much longer period of time. Many of these plans bear close scrutiny. Most of them have the commercial interest uppermost. It is significant that well established and experienced insurance companies have not undertaken to offer this type of insurance. Most of the organizations offering such protection are new and are not always well established. Such agencies are necessarily organized to make a profit. If hospitalization of policy holders should become unexpectedly heavy, the company will have to cut its expenses; it cannot afford to face a deficit. Self-preservation would compel it to reduce its expenses and the easiest way is by curtailing medical service and cheapening it with inferior help and material.

An interesting discussion of plans of hospital insurance occurred in Chicago a few months ago. Here there was introduced a carefully thought out insurance plan referred to as the "Chicago plan." This was developed by the cooperation of most of the hospitals in Chicago. It was hoped that all of the hospitals would subscribe to it within the next year. The plan consists of the formation of an insurance company whose stock is entirely owned by the Chicago hospitals, who in this way could control its business policy. This insurance will provide complete hospital care for twenty-one days at a premium of eighty-five cents per month and is open only to those who have regular employment and whose salaries are less than \$2,000 per annum. The policy does not provide the physicians' fees nor

the fees of special nurses. Under this plan any reputable physician may send his patients to any Chicago hospital. There is no interference whatever between the patient and his doctor. The monthly premium is subject to change from month to month, the purpose being to give policy holders the advantage of any savings that have been made.

This proposal has received the approval of many local physicians. A similar plan is under consideration by the hospitals of New York City. The advantage of this plan is that of distributing the cost of hospital services over an extended period in such small payments that its cost is scarcely felt. Moreover, the hospitals control the insurance company and its financial management.

While the representatives of the American Medical Association did not openly condemn this plan they did point out three criticisms, as follows:

First: The Chicago hospitals were mistaken in their actuarial figures and their premiums were for this reason too low. The Chicago hospitals estimated that the percentage of hospitalization would be between seven and ten while the Association representatives held that it would vary from ten to thirty.

Second: The adoption of this plan would require the hospitals to provide a sales organization to sell this insurance. It would be impossible to get a large sales force that would not, in its enthusiasm, promise too much to prospective clients. In fact, many would buy the insurance with the impression that it included all medical costs and much discontent would arise when it was found that the insurance does not include the doctor's fees. Moreover, the hospitals by employing such a sales force would be soliciting business which is in direct violation of the code of ethics. The fact

that all of the hospitals in this district are equally interested may mitigate the seriousness of this infraction of the code of ethics.

Third: The plan does not adequately allow for the weaknesses of human nature. Many policy holders will put pressure on their doctors to send them to a hospital so they "can get their money's worth." Moreover, the plan would permit a policy holder to enter any hospital in the city on equal terms, whether the hospital is very modern, finely and elaborately equipped or is antiquated and less completely furnished. It would be natural for patients to desire the finest hospital. If his doctor does not belong on the staff of the finest hospitals the patient might discharge him and change to a member of the staff of the more elaborate institution and thus upset the present practice in the city, and lead to wide spread dissatisfaction among the general practitioners of the city. The answer to this contention was that the bed occupancy under present financial difficulties is higher in the poorer hospitals than in the larger and more modern hospitals, indicating that the great bulk of patients will go wherever their doctors tell them to go.

The Chicago plan looks reasonably good. This plan is sometimes referred to as the periodic payment plan for purchase of medical care. It has defects, to be true, but no plan can be expected to be perfect. The working out of this plan and a similar one in New York City should be watched with great interest by all physicians and hospital administrators. Manifestly, it would scarcely be worth a trial unless all hospitals in a community agreed to it. In smaller communities the plan would have to be modified if it were to be tried at all.

H. R. W.

EDITORIAL COMMENT

The *Illinois Medical Journal* has suggested the doctor is the real "Forgotten Man."

The American Proctologic Society will hold its 34th Annual Meeting in Chicago, June 12 and 13.

Ten states in 1932 licensed physicians who were graduates of unapproved medical schools.

Horlick's Malted Milk acceptance by the Committee on Foods has been withdrawn inasmuch as the manufacturer was unwilling to remove the feeding formulas from advertising addressed to the public.

The United States Public Health Service reports a very noticeable decrease in smallpox incidence in the past two years. The number of cases reported in 1930 was 48,907; 1931, 30,232, and 1932, 11,168.

According to a recent announcement, cancer will soon be treated at Mercy Hospital, Chicago, with a giant x-ray tube with a voltage of 800,000 and a radiation output equivalent to radium worth many millions. The tube itself is 14 feet long.

At a meeting of the Board of Directors of the Commonwealth Fund on April 18, a special grant of \$10,000 was made for a continuation of the clinical studies of rheumatic fever by Dr. May Wilson in the special clinic of the pediatric department of New York Hospital.

Members of the Vienna Medical Faculty who have given medical testimonials for yeast "were officially sharply reproved by the dean, and all members of the faculty were forbidden to give any testimonials intended for advertising purposes in the future." This information was contained in a letter to the *Journal of the American Medical Association*, printed in the January 7, 1933, number, page 60.

THE PRESIDENT'S MESSAGE

To the Members of the Kansas Medical Society:

All who attended the last state medical meeting will agree with me that it really was a wonderful one. This meeting you will remember was called the "Home-coming" meeting but being the seventy-fifth and realizing the value the profession derived from it we should have called it the "Diamond" meeting.

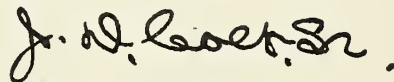
The most unfortunate feature of holding these state meetings is too many of us fail to attend. I know I have never attended any medical meeting without deriving some professional good. The exchange of ideas with your fellow practitioner always brings out of him, also to you, some thought—possibly new, possibly you had known but forgotten. Besides don't we all have a little more confidence in ourselves after we have found out what the other fellow's reaction is on certain professional, social and financial matters?

Not always is it necessary for these thoughts to be brought out by the scientific program, but when you have the personal touch of your fellow practitioners you are bound to pick up something worth while.

We were most loyally entertained while in Lawrence by the members of the Douglas County Medical Society. In fact I can think of nothing left undone that would have added to the success of the meeting. The meeting place was fine; the hotel accommodations were adequate; the entertainment and banquet well cared for and the scientific program one of the best—which all together made the meeting one of the most successful I have attended.

I, as President of the Kansas Medical Society, express the thanks and appreciation of every member who attended for the wonderful hospitality and courtesy shown all of us by the Douglas County Medical Society.

Respectfully submitted,



Manhattan, Kansas

President, Kansas Medical Society

May 26, 1933.

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

In this space last month, was discussed the physiology of the stomach. In this article I would like to consider some of the practical points in gastric analysis.

It is bad practice to attempt a gastric analysis upon the patient before the complete physical examination with the idea of ruling out esophageal stenosis, malignancy, aortic aneurysm and esophageal varices. In these conditions, the complications that may follow an attempted gastric analysis do not warrant the attempt. Only under urgent circumstances should it be attempted in pregnancy and in patients that are very ill. Even with every care and precaution an occasional rupture of a gastric ulcer or malignancy will result.

As a routine, the Ewald test meal, consisting of 1 to 2 slices of plain dry bread and 300 to 400 cc. of water is probably the test of choice, yielding the most uniform results. It is not necessary, but more accurate results will be obtained if the contents of the stomach are removed before administration of the test meal. The fasting stomach will contain from 5 cc. to 100 cc. of fluid.

The fractional meal where 20 cc. are removed each 15 minutes for 4 to 8 periods will detect slight variations from the normal but will often give misleading results. Many patients seriously object to retaining the tube for one hour. Everything considered, the fractional test is not recommended for routine work.

If it is desired to study only the ability of acid production of the glands as in primary anemia, the histamine test is satisfactory, whereby 2.5 cc. of 1:10,000 histamine is injected subcutaneously. It is used on either the fasting stomach or after a water meal. Specimens are removed at 20 and 30 minute intervals and tested for acidity.

On gross inspection of the stomach contents, the examiner should observe and note the amount of fluid; macroscopic blood, whether fresh or old; food residue, mucus and any other special points of in-

terest.

Chemical examination, routinely should be for free hydrochloric acid, combined acid, lactic acid and blood. In certain cases, it is well to test for bile, total proteins, pepsinogen, rennin and trypsin.

The microscopical examination should observe and note the presence of blood, pus cells, bacteria, mucus and fungi.

The test for free hydrochloric acid, made upon strained gastric contents is reported in degrees, which is obtained by titrating the stomach contents with indicator, against N/10 sodium hydroxide. The principal points of practical application are as follows: (a) absence of free hydrochloric acid in primary anemia; (b) absence or greatly reduced free hydrochloric acid in gastric cancer, and (c) increased free hydrochloric acid in gastric ulcer and many nervous manifestations. Lactic acid is best determined by the Strauss method and is only found when there is either a decreased or absent free hydrochloric acid. Lactic acid is due to the fermentation of the carbohydrates. Cancer of the stomach will usually give a positive lactic acid test. Occult blood is associated with either ulcer or cancer. Fresh blood may be due to trauma, straining, cancer or ulcer, or associated with manipulations in administering the tube. The presence of bile or trypsin is evidence of regurgitation from the duodenum.

Protein determination should be made upon fasting contents and as a rule follows along with the acidity but in some diseases, especially in cancer, may be increased out of proportion to the acid.

The microscopic examination must be made upon two slides, one, a fresh preparation; the other, dried and stained with dilute carbol or gentian violet. On the unstained slide, observation is made of the presence of red or white cells, mucus, epithelium, food cells and tissue fragments. On the stained slide, examination is made for bacteria, yeast and sarcina. The finding of Boas-Oppler bacilli means stagnation, which is often associated with carcinoma of the stomach but is also found in other conditions which produce a stagnation of the stomach contents. Neither does their absence rule out carcinoma for they do not appear usually until obstruction at which time the diagnosis can usually be made by physical or x-ray examination.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

BACTERIOPHAGE

The author who is Professor of Bacteriology in the University of Michigan Medical School writes a very entertaining article on the history of the bacteriophage along with the method of its preparation, its general characteristics, and its mechanism of action. He comes to the conclusion that a careful perusal of the rapidly accumulating literature on the clinical use of the bacteriophage can only impress one with the fact that no definite conclusions can be drawn. While the selection of the lytic agent is probably justifiable in instances where other measures are not useable, and should be employed, the procedure should be considered experimental only, hence carefully controlled. There are no data to indicate that bacteriophagy is on a sufficiently sound basis to warrant its unrestrained exploitation or promiscuous use.

The Bacteriophage: Soule, M. H., *Journal of the Michigan State Medical Society*. Vol. 32:8-14, January 1933.

POST-OPERATIVE PULMONARY ATELECTASIS

This author writes about a subject which he says is the most common pulmonary complication of operative procedures, and quotes various authorities saying that it occurs in from 10 per cent to 20 per cent of all post-operative cases and perhaps to some extent in all. He favors chiefly the carbon dioxide treatment in which he uses a mixture of 10 per cent carbon dioxide and 90 per cent oxygen given from three to many times a day for a period of three minutes. He particularly recommends that it be used for anyone who undergoes an abdominal operation, those who have excessive bronchial secretion, and with all elderly and debilitated persons. He maintains that it produces an increase in the rate and depth of respiration, maintains the thorax in a state of greater expansion and produces violent movement in the tracheo-bronchial tree, sending the dislodged adherent mucus out and thus opening the air passages. He concludes

with a bibliography of 83 references.

Prophylaxis of Postoperative Pulmonary Atelectasis. Bergh, George S., *Minnesota Medicine* Vol. 16:105-119. February 1933.

NEOARSPHENAMINE AND ARSPHENAMINE

Dr. Thornley gives a report of 5,245 cases of syphilis treated over a period of ten years, which shows the ultimate value of the arsenicals in general and the comparative virtues and short-comings of neoarsphenamine and arsphenamine in the treatment of syphilis. Nine hundred and ninety-nine of these patients were under treatment or observation for not less than six months. Mercury salicylate, in the dose of 1 grain once a week intramuscularly, with both neoarsphenamine and arsphenamine is given so that whatever changes or differences there may be in the effects of the two drugs may be due to the arsenical and not the mercury. From a serologic standpoint, the results of the two drugs are so close that there is little choice between them. The two drugs are given in exactly the same dilution and dose by the gravity method. First neoarsphenamine was given in the proportion of six to nine; 0.7 gm. of arsphenamine and 1 gm. of neoarsphenamine each week in two doses was given. Dermatitis resulted in three cases and the dosage was cut down to 0.7 gm. per week in two doses for each drug. The author draws the following conclusions, that it is fairly evident from the statistics presented that the efficacy of neoarsphenamine and arsphenamine is not very great when the neoarsphenamine is given well diluted in moderate dosage, and by the gravity method. Certainly the reactions are so much less by the gravity method that this fact should more than counterbalance the convenience of the syringe method.

Comparison of Neoarsphenamine and Arsphenamine: Thornley, J. P., M.D. Results and Reactions in Nine Hundred and Ninety-nine Patients under Treatment or Observation Not Less Than Six Months. *Archives of Dermatology and Syphology*, 27:185-198. February 1933.

HYPERGLYCEMIA IN SKIN DISEASES

Dr. Tauber presents a study of the blood sugar in over 1,500 persons and of blood sugar tolerance tests made on about half that number. The first group consisted of 514 diabetics, the second

group of 504 patients admitted for a great variety of causes, and the third group 511 dermatologic cases. In summarizing, the author states that in direct opposition to the statements in the literature that common disorders of the skin are associated with hyperglycemia, he found that almost without exception the blood sugar is normal, and in furunculosis the reverse of hyperglycemia is the rule and the fact. Whether or not certain groups of cutaneous diseases are connected regularly with hyperglycemia is doubtful. He believes that dextrose given intravenously with a high carbohydrate diet, is almost specific in the cure of furunculosis (Intravenous injections of 500 cc. of 5 per cent dextrose are given daily for six successive days.)

Hyperglycemia in Diseases of the Skin: Tauber, Elmore B., M.D. Archives of Dermatology and Syphilology. 27:198-206. February 1933.

SIMMOND'S DISEASE

Dr. Silver gives the report of a case of Simmond's disease with the post-mortem observations and a review of the literature. He says that attention has been called to a syndrome not frequently encountered in English literature and one that he believes to be more common than is generally accepted. In its fully developed form it is readily recognized by the association of extreme cachexia with signs and symptoms of gonadal atrophy. The onset of the disease is often consequent on a complicated labor, and among the clinical features may be mentioned premature aging, early and complete amenorrhea, loss of pubic and axillary hairs, atrophy of the lower jaw with loss of teeth and a profound depression of the basal metabolic rate. In addition to the advanced obvious cases, attention should be directed to mild, abortive forms that masquerade under such diagnoses as arteriosclerotic cachexia, syphilitic cachexia and latent tuberculosis. To combat the extreme cachexia and anorexia that is present he suggests, general hygienic and dietetic measures should be followed. In addition, the careful administration of insulin (Falta) in doses of from 2 to 20 units subcutaneously one-half hour before meals may be a useful aid in increasing the weight of the pa-

tients. The physiologic significance of disease in the pituitary region is great, and much can be learned from observing closely patients presenting signs of pituitary cachexia.

Simmond's Disease (Cachexia Hypophyseopriva): Silver, Solomon, M.D. Report of a Case with Post-mortem Observations and a Review of the Literature: Archives of Internal Medicine: 51:175-200. February 1933.

POST-ENCEPHALITIC BEHAVIOR

Bond reports that experiences with many children who have suffered not only from true epidemic encephalitis but also from pseudo-encephalitis, show that the resulting behavior trouble is not due to the brain lesion only but the lesion plus ignorant and inefficient handling of its results. Epidemic encephalitis is an infection of the brain substance and in severe cases it brings severe results, but in mild cases it brings about curious changes in the character of children. It is an infection which brings bad behavior, even some kind of crime, into the medical field. If the child is allowed to feel insecure, if he is misunderstood, laughed at, spoiled, a bad outlook is sure. Treatment then, can logically be aimed, not at the unreachable organic process but at the emotional re-education, character making, and ought to be about the same as can be applied to all unusually bright and active children who get into trouble at home and at school. It is said that "these post-encephalitic children are like all children, only more so." The doctor can do much to relieve the tremendous feelings of inferiority and insecurity that hamper childhood. The author feels it would be a well handling of the cases if almost all of "the bad behavior cases" could be turned back at their source by general practitioners who knew how to handle the mental factors in feeding illness and convalescence, which would leave only a few of the more clearly defined cases to go over to a specialist for treatment, which he says is preferably for training in a cottage under the supervision of a state hospital for mental diseases.

Post-Encephalitic Behavior and the General Practitioner: Bond, Earl D., M.D. Delaware State Medical Journal, 4:21-23. February 1932.

Proceedings of Annual Meeting

(Continued from Page 229)

been a gradual decrease in the membership of the society each year and this year promises, possibly, a greater decline than of previous years.

A few of our good county societies have been unfortunate in having their funds deposited in banks that were either closed by the moratorium or opened on a restricted basis, thus tying up their funds indefinitely, and the members do not feel able to pay their dues a second time even to remain in good standing in our state society.

Within the past month our office has sent out approximately 500 statements to delinquent members and numerous replies have been received in which many of the members complained that the present dues were too high and not in keeping with the present economic conditions. As a result of this sentiment expressed by so many, I am of the opinion that some action should be taken by the way of a reduction of the annual dues of the Kansas Medical Society. Several of the state societies are contemplating a reduction of dues, among them is our neighbor state—Missouri. Therefore, in the face of these facts, your secretary would recommend that this House of Delegates consider the reduction of annual dues for the year beginning January 1, 1934. And that the new council on Thursday morning make a proportionate reduction in the budget for our fiscal year commencing May 1, 1933.

We trust that you have read your programs and have found therein much of interest. We think it is a fine program and much of the success of it is due to the hearty co-operation of the county secretaries and the generosity of the members of the local societies in the contribution of these excellent papers.

To the secretaries and members who have furnished us with these papers we give our sincere thanks.

Dr. Colt, our president, has been a real help in all matters pertaining to the Kansas Medical Society. He has been ready and willing at all times to counsel and co-operate with us and we tender him our heartfelt thanks and gratitude.

To our honored guests whose contributions have added so materially to the excellence and value of this program we extend our thanks and also those of the Kansas Medical Society at large.

Respectfully submitted,

J. F. HASSIG, M.D., Secretary.

On motion by Dr. C. C. Stillman, regularly seconded and carried, the report was accepted and filed.

TREASURER'S REPORT

To the House of Delegates of the Kansas Medical Society:

Standing of funds May 1, 1932:

Medical Defense	\$10,896.71
General Fund	8,051.16
	<hr/> \$18,947.87

Cash received from

Secretary	\$ 8,442.00
Interest on Liberty Bonds	351.25
	<hr/> \$ 8,793.25
	<hr/> \$27,741.12

Expended for year ending May 1, 1933:

Medical Defense	\$1,583.60
Gov. tax on checks .....	.26
General Fund	8,477.38
Gov. tax on checks .....	.82
Gov. tax on checks reported by secretary .....	.04
	<hr/> \$10,062.10
	<hr/> \$17,679.02

Standing of funds May 1, 1933:

Medical Defense	\$11,724.85
General Fund	5,954.17
	<hr/> \$17,679.02

Eleven thousand dollars of the above amount is invested in Government bonds.

The following vouchers of expenditures are herewith listed:

DEFENSE FUND

Date	Vch. No.	Name	Amount
May 16, 1932	169	O. P. Davis	\$ 75.00
May 28, 1932	170	J. D. M. Hamilton....	229.35
July 1, 1932	171	O. P. Davis	6.00
July 21, 1932	172	J. D. M. Hamilton....	77.80
Aug. 17, 1932	173	O. P. Davis	75.00
Aug. 23, 1932	174	J. D. M. Hamilton....	75.00
Oct. 12, 1932	175	Am. Med. Ass'n.....	7.00
Oct. 24, 1932	176	J. D. M. Hamilton....	271.45
Nov. 10, 1932	177	O. P. Davis	75.00
Dec. 5, 1932	178	J. D. M. Hamilton....	301.40
Jan. 20, 1933	179	J. D. M. Hamilton....	90.60
Feb. 2, 1933	180	O. P. Davis	75.00
Apr. 4, 1933	181	J. D. M. Hamilton....	225.00
			<hr/> \$1,583.30

GENERAL FUND

Date	Vch. No.	Name	Amount
May 6, 1932	338	Earle G. Brown, M.D..	\$2,000.00
		(Journal)	
May 6, 1932	339	Earle G. Brown, M.D..	500.00
		(Bur. Pub. Rel.)	
May 6, 1932	340	J. F. Hassig, M.D.....	1,402.82
May 6, 1932	341	B. R. Riley, M.D.....	9.49

May 6, 1932	342	Effie Gillispie	10.00
May 14, 1932	343	K. C. K. C. of C.....	22.00
May 16, 1932	344	H. H. Shoulders, M.D.	77.74
May 16, 1932	345	Clifford G. Grulee....	45.68
May 16, 1932	346	The Evans Press.....	18.75
May 16, 1932	347	R. A. Kinsella, M.D....	38.00
May 16, 1932	348	Grund Hotel	5.00
May 17, 1932	349	H. J. Howard, M.D....	31.20
May 18, 1932	350	P. A. O'Leary, M.D....	45.52
July 11, 1932	351	J. L. Evans, M.D.	5.38
July 19, 1932	352	Earle G. Brown, M.D..	500.00
		(Bur. Pub. Rel.)	
Sept. 8, 1932	353	Earle G. Brown, M.D..	500.00
		(Bur. Pub. Rel.)	
Nov. 11, 1932	354	Earle G. Brown, M.D..	500.00
		(Bur. Pub. Rel.)	
Jan. 5, 1933	355	Iola Greenhouse	18.00
Jan. 18, 1933	356	R. T. Nichols, M.D....	11.84
Jan. 18, 1933	357	J. D. Colt, M.D.....	15.48
Jan. 18, 1933	358	E. C. Duncan, M.D....	18.80
Jan. 18, 1933	359	O. P. Davis, M.D.....	6.95
Jan. 18, 1933	360	J. T. Axtel, M.D.	21.86
Jan. 18, 1933	361	J. F. Gsell, M.D.....	26.30
Jan. 18, 1933	362	C. C. Stillman, M.D....	18.70
Jan. 18, 1933	363	Alfred O'Donnell, M.D.	12.00
Jan. 18, 1933	364	H. O. Hardesty, M.D....	37.48
Jan. 18, 1933	365	I. B. Parker, M.D.....	36.00
Jan. 18, 1933	366	C. H. Ewing, M.D.....	37.70
Jan. 18, 1933	367	W. F. Fee, M.D.	40.00
Jan. 18, 1933	368	J. F. Hassig, M.D.....	689.13
Jan. 20, 1933	369	Am. Med. Ass'n.....	17.50
Jan. 23, 1933	370	Earle G. Brown, M.D..	1,000.00
		(Journal)	
Feb. 1, 1933	371	The Evans Press	23.50
Feb. 16, 1933	372	E. C. Duncan, M.D....	50.55
Feb. 14, 1933	373	Earle G. Brown, M.D..	200.00
		(Journal)	
Feb. 20, 1933	374	Kansas Bankers Ass'n.	10.00
Mch. 28, 1933	375	E. C. Duncan, M.D....	51.10
Apr. 4, 1933	376	St. Louis Button Co....	12.16
Apr. 10, 1933	377	Earle G. Brown, M.D..	325.00
		(Journal)	
Apr. 20, 1933	378	The Evans Press	85.75

\$8,477.38

The expenditure from the Defense Fund has been normal or about the same as for 1932, but an analysis of the expenditure from the General Fund shows a marked increase in the expense for the Medical Journal and Folks. The expenditure for the Journal was \$3,200 made up of the following items: May 6, salary of editor, \$2,000; January 23, check to cover deficit, \$1,000; February 14, check to cover deficit, \$200. Expenditures in the publication of Folks amounted to \$2,000 and then there was an item made up by deficits in Journal and Folks amounted to \$325 voucher of April 10. The total expenditure for Journal and Folks amounted to \$2,952.38 making a total expenditure in the General Fund for the year \$8,477.38. The publication of Folks was discontinued with the March number by order of the Executive Committee. We felt that the General Fund would not permit further expenditure for this

publication as the monthly deficits were so large.

The further publication of the Journal of the Kansas Medical Society should be given serious consideration as it is probable that you will have a greater expenditure for the coming year than you had last year. Judging by last year's expenditures, the expenditure for the coming year will be at least \$4,000 and you only have \$5,954.11 in your General Fund. The expense at the annual meeting generally amounts to about \$3,600, \$2,000 of which is salary of the editor. With only \$5,954.11 to begin with an expenditure of \$3,600 at the annual meeting leaves \$2,354.11 to carry you through the year. With probably further expenditure of \$2,000 for publication of the Journal would leave you \$1,354.11 to carry the balance of the expense for the year.

The Public Relations Committee has been an expensive experiment for the Kansas Medical Society, costing you in the neighborhood of \$12,000 during its life of six years, amounting to about \$2,000 a year. If this Public Relations Committee cannot function without the expenditure of these large sums of money and with apparent benefit to the society, then I think it would be best if it was wiped out entirely. In fact, I see no reason for the continuation of this committee. There are no particular functions to be performed by this committee that are not now and can be taken care of by other committees.

At the mid-winter meeting of the Council I was instructed to use my judgment in taking out memberships in the Kansas Chamber of Commerce. I obtained a list of the physicians belonging to the Kansas Chamber of Commerce and the list of memberships paid for by the Medical Society for 1932. After looking over these lists, I concluded that the Kansas Medical Society should not make further expenditure of money for these memberships unless such memberships could be so distributed as to be of benefit to the society. So this expenditure was never made for 1933.

Respectfully submitted,
GEO. M. GRAY, M.D., Treasurer.

On motion regularly made, seconded and carried, the report was received and placed on file.

Following the treasurer's report there was some discussion as to the Journal deficit which the editor attributed to the decrease of advertising.

REPORT OF MEDICAL DEFENSE BOARD

To the House of Delegates:

The Medical Defense Board respectfully submits its annual report for the past year. As will be seen from the report of our attorney, which is appended hereto, and which is to be considered a part of this report, there have been four new cases filed during the year, as compared with eight the preceding year. We have, at this time, seventeen cases on file, as compared with eighteen last year. Three cases have been tried during the year, two of them resulting in our favor and one resulting in a hung jury. One other case was settled by the insurance company which was associated in the litigation. Such settlement was contrary to our policy, as is well known. Our purpose is to clear the physician's reputation of the charges against him, as well as to inhibit the practice of suing our members for alleged malpractice, both of which purposes are defeated by settlement or compromise. We have adhered to the policy through all the years of giving our defendant members a vigorous and untiring defense through all the courts and of making those who start these suits thoroughly weary of their misguided efforts. This is the reason why we have so few new cases now as compared with former years. We are looking forward hopefully to the not far distant day when we may be able to report no new cases during the preceding year and dockets clear of the old cases. But we shall not favor, even then, the discontinuance of our system of medical defense.

It is now twenty-two years since our medical defense plan was inaugurated. The present chairman of the Defense Board was president of the society that year and is glad to have had his year in that office marked by an enterprise of such lasting value. The late Dr. W. E. McVey was chairman of this board from

its inception in May, 1911, to January, 1915, when he was elected editor of the Journal. The present chairman was elected to succeed him and has held the post to the present time. During that time some experience has been acquired and much confidence in the value of our system. And the attitude of our membership has gradually changed, during the years, from one of indifference or even antagonism to a growing appreciation of its benefits. It has come to be recognized that a work is being done that the insurance companies cannot do. We are not only giving our members an effective protection, but we are developing in them a sense of mutuality or solidarity which does far more for the profession than help to win a case at law.

During the past year, the total cost of medical defense has been \$1,583.60, accounted for by vouchers Nos. 169 to 181 inclusive, as shown in the report of the treasurer. This is \$229.24 less than was expended last year. However, owing to the serious illness of our attorney, Judge Hamilton, during February and March, some of the cases due for trial had to be postponed, and in this way our expenses are lower than they would have been otherwise.

We have accumulated a reserve defense fund, during the years, which, according to the report of the secretary a year ago, amounted to \$10,896.71. This gradually increasing fund would have attained to much larger dimensions if the interest accruing from its investment had been added each year to the fund. This should have been done, and there is no justification for any other course. The income from any reserve fund or fiduciary commitment accrues naturally to that fund or commitment, in the absence of specific legal instructions to the contrary. It has been through oversight that attention to this matter has not been called long before this time.

We wish to acknowledge our continued satisfaction with the efficient work of our attorney, the Honorable John Hamilton, in our behalf, and we are certain that many of our members, in all parts of the state, who have had personal knowledge and observation of his con-

duct of our business, will heartily join in this acknowledgment.

We subjoin a table of expenditure of this board, by years, for nineteen years, which may be of interest.

DEFENSE BOARD EXPENDITURES—19 YEARS

1915	.....	\$ 1,254.95
1916	.....	1,189.27
1917	.....	777.45
1918	.....	809.58
1919	.....	759.41
1920	.....	1,245.51
1921	.....	1,458.35
1922	.....	1,236.08
1923	.....	1,310.96
1924	.....	1,479.76
1925	.....	1,970.05
1926	.....	2,008.13
1927	.....	1,981.03
1928	.....	1,949.02
1929	.....	2,279.43
1930	.....	1,549.54
1931	.....	1,759.86
1932	.....	1,812.84
1933	.....	1,583.60

Total 19 Years\$26,849.22
Average per year 1,496.45

Respectfully submitted,
O. P. DAVIS, M.D.

On motion by Dr. Davis, regularly seconded and carried, the report was accepted and filed.

April 21, 1933.

Dr. O. P. Davis, Chairman,
Medical Defense Board,
Topeka, Kansas.

Dear Doctor Davis:

I am herewith enclosing my report for the year beginning April 1, 1932, and ending April 1, 1933. Accompanying this report is a summary setting out a brief resume of each of the cases now pending together with its present status.

As in the case of my prior reports, I desire to call attention to the following matters:

First: The summary discloses that during the period involved only four new cases were filed, as compared with eight for the preceding year.

Second: We are at this time carrying seventeen cases, as compared with eighteen for the preceding year.

Third: During the course of the year three cases were tried. Two of these cases resulted in verdicts for the de-

fendant and one resulted in a hung jury. One other case was disposed of by settlement by the company carrying liability insurance. The fact that more cases were not disposed of is probably accounted for by the fact that several of these cases were set for trial during February and March and, unfortunately, the writer was ill during that period and the court and counsel for plaintiffs were considerate enough to allow these cases to be put off. From this situation we can expect the trial of more than the usual number of cases in the coming year.

Trusting that this report will have the approval of yourself and the committee, I am

Very sincerely yours,

Signed: J. D. M. HAMILTON.

SUMMARY OF CASES MEDICAL DEFENSE BOARD
APRIL 1, 1932, TO APRIL 1, 1933

1. Dr. A. R. Nash v. Mangan. Cross petition for negligent failure to properly diagnose infection of jaw bone. Filed 6/30/28. At issue. Case has been pending nearly 5 years with no disposition on part of claimant to press it to trial. Doubtful if it ever will be tried.

2. Smith v. Mayo Hedge. Failure to properly treat during pregnancy. Filed 6/28/29. At issue.

3. Cooke v. J. C. Bunten. Failure to properly treat and diagnose fracture of left arm. Filed 2/21/30. Judgment of trial court sustaining demur to answer affirmed by supreme court and case returned to district court and now for trial.

4. Murthe v. C. D. Armstrong, C. M. Fitzpatrick, H. V. Soliss and The Nazareth Convent and Academy. Negligent failure to properly protect plaintiff during course of operation in which she received burns on her feet. Filed 6/2/30. Second trial of case resulted in verdict for all defendants and case is now pending on plaintiff's motion for new trial.

5. Liebach v. B. E. Miller and C. C. Kerr. Negligent removal of portion of Uvula during tonsillectomy. Filed 10/10/30. First trial resulted in verdict for plaintiff for \$2,500. Defendant's motion for new trial sustained. Second trial resulted in hung jury. Now pending for third hearing.

6. Sykes v. C. D. Blake, C. M. Miller and Hays Prot. Hospt. For negligence in failing to remove sponge during operation for sarcoma. Filed 1/21/31. (Logan County). Case disposed by insurance carrier.

7. Cloninger v. Julius Rotter. Action for negligence in failing to remove drainage tube. Filed 10/6/31. Pending on preliminary motions.

8. Umschied v. M. A. Brawley. Action for negligently failing to properly pack nose after minor operation resulting in inspiration of blood into lungs. Filed 4/24/31. Upon trial defendant's demurrer sustained and judgment for defendant. Plaintiff having failed to take appeal, case is finally concluded.

9. Buchner v. John Outland and H. W. Nye. Action for negligence in operating for hernia. Filed 9/24/31. Removed to Federal court. Pending on preliminary motions.

10. Root v. J. M. Jaquiss et al. Action for negligently failing to properly treat hemorrhage caused by injury to left leg. Filed 11/21/31. At issue.

11. Sykes v. C. D. Blake. For negligence in failing to remove sponge during operation for sarcoma. Filed 1-25-32. (Ellis County). Disposed of by insurance carrier.

12. Oscar Sharp and Ethel Sharp (Drs.) v. E. E. Coulter. Cross petition alleging negligence through use of radium. Filed 2/18/32. (City court). Dismissed.

13. Coulter v. Oscar Sharp and Ethel Sharp (Drs.) Action for negligent use of radium in treating cancer of womb. Filed 2/18/32. At issue.

14. Evans v. Halstead Hospital Association, Arthur E. Hertzler and V. E. Chesky. Action for assault in extending operation without consent of patient. Filed 4/8/32. At issue for trial.

15. Van Nover v. E. J. Nodurft. Action for negligence in failing to take proper care, resulting in septicemia following childbirth. Filed 6/22/32. Pending upon preliminary motions.

16. Gooch v. Dr. K. Armand Fischer. Action for negligent treatment of fracture of the radius and dislocation of ulna. Filed 10/8/32. At issue.

17. Marshall v. Arthur C. Armitage. Action for negligent failure to reduce fracture of left arm. Filed 12/6/32. Pending on preliminary motions.

On motion by Dr. O. P. Davis, regularly seconded and carried, that the reading of the Councilors' reports be dispensed with, and that the Councilors hand their reports to the Secretary to be incorporated in the minutes for publication in the Journal.

(To be continued)

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COUNTY SOCIETY NEWS

BUTLER-GREENWOOD COUNTIES MEDICAL SOCIETY

The Butler-Greenwood Counties Medical Society met in El Dorado, at the Country Club, May 12, 1933.

Dr. A. E. Hertzler of Halstead gave an interesting discourse on Dysmenorrhoea with Particular Relation to Endocrine Origin.

Visiting members included: V. E. Chesky, Arch Spelman, and G. A. Westfall, of Halstead; N. L. Raney, E. C. Raney, B. P. Meeker, C. T. Hinshaw, and F. J. McEwen of Wichita.

WM. E. JANES, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

The Clay County Medical Society sponsored a clinic for skin diseases conducted by Doctors Paul F. Stookey and Huebert Parker at the Clay Center Municipal Hospital, Wednesday afternoon, May 10. In the evening at the regular monthly meeting, Dr. Stookey lectured on the "Treatment of Syphilis," and Dr. Parker on the "Pharmacology of Antisyphilitic Drugs."

The next regular meeting will be held in the Tankersley Hotel, Clay Center, June 14. The society members of Clay Center will entertain the out of town members and guests at a dinner preceding the meeting.

W. H. ALGIE, M.D., Secretary.

SEDGWICK COUNTY MEDICAL SOCIETY

Following a successful year of strenuous activity upon the part of the officers

and members, the Sedgwick County Medical Society brought its winter season to a close at the annual meeting held May 16, at the Allis Hotel.

Annual reports of the treasurer and committee chairmen were heard after which officers for 1934 were elected from nominees presented at the previous meeting. Dr. Hal E. Marshall, at present serving in the office of secretary, was elected president to succeed Dr. C. D. McKeown after January 1. Dr. E. H. Terrill was elected vice-president, succeeding Dr. Fred McEwen. Dr. H. W. Palmer was named secretary and Dr. A. W. Fegtly was re-elected to the office of treasurer.

Doctors J. D. Clark, E. D. Ebricht and C. D. McKeown were selected to fill three expiring terms on the Board of Directors. Dr. L. S. Roberts will fill the expiring term on the Board of Censors.

Following the business meeting, Dr. Henry N. Tihen addressed the society on his observation of European practice, under the title of "Medical Medley." Later, he gave a short talk illustrated with motion pictures upon Greek history and mythology.

The Annual Meeting brings to a close scientific gatherings of the society until next September, however, the organization will maintain its activities throughout the summer and the executive office and standing committees will continue to perform their usual functions.

MAC F. CAHAL, Executive Sec.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at the Hotel Jayhawk, Monday evening, May 1. President Marvin Hall presided.

The program consisted of two papers: Dr. C. K. Schaffer, "Hemicrania Atrophy," and Dr. William C. Menninger, "The Role of Financial Losses in the Precipitation of Mental Illness."

More than 60 members and visiting physicians were present.

EARLE G. BROWN, M.D., Sec.

DEATH NOTICES

COURTWRIGHT, WILLIAM T., Sedan, aged 67, died March 14, 1933, of chronic nephritis. He graduated from Medical College of Ohio, Cincinnati in 1886. He was not a member of the Society.

FISHER, DAVID S., Reading, aged 75, died May 14, 1933, of heart disease. He graduated from College of Physicians and Surgeons, Baltimore, in 1884. He was a former member of the Society.

HAHN, MILTON, Arkansas City, aged 50, died February 13, 1933, in Research Hospital, Kansas City, Missouri, of coronary occlusion. He graduated from Johns Hopkins University School of Medicine, Baltimore, in 1907. He was a member of the Society.

McCREERY, GUY ROBERT, Hugoton, aged 54, died April 15, 1933, in Wichita Hospital, of coronary infarct. He graduated from College of Physicians and Surgeons, Kansas City, Kansas, in 1902. He was not a member of the Society.

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Clinical Director

GLENN R. PHELPS
Business Manager

(Continued from Page 222)

where he practiced general medicine and surgery until 1884. He then went to New York City, where he took a special course on the eye, ear, nose and throat. He located in Topeka June 8, 1885, where he practiced his specialty for about twenty-five years. He held the position of chief eye and ear surgeon of the Atchison, Topeka and Santa Fe Railway for many years. In the spring of 1890 Dr. Minney entered into partnership with Dr. R. S. Magee, which partnership continued under the firm name of Minney and Magee for twenty-five years. In 1900 the firm was enlarged by the addition of a son, Dr. George M. Minney, changing the firm name to Minney, Magee and Minney and this remained until the family removed to California and Dr. Minney retired from practice.

During his practice in Topeka he was Secretary of the Kansas Medical Society for three years and its President for one year. He assisted in 1890 in the formation of the American Medical College Association at Nashville, Tennessee. He was likewise prominently active in the formation of the Kansas Medical College, in 1889 at Topeka; served as Dean for fifteen consecutive years, resigning in 1904 because of ill health. This college was later merged into the Medical School of Kansas University. Dr. Minney removed to Los Angeles, California in 1909, later to Altadena, where he died.

R. S. MAGEE, M.D.

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of March 31 the following have been accepted:

Cutter Laboratory—Polyanaerobic Antitoxin, Prophylactic (Tetanus-Gas Gangrene Antitoxin). Polyanaerobic Antitoxin, Therapeutic (Gas Gangrene Antitoxin.)

E. Fougera & Co.—Capsules Lipiodol-Lafay, 0.5 gm. Tablets Lipiodol-Lafay, 0.04 gm.

Merck & Co., Inc.—Calcium Gluconate-Merck. Phenobarbital Sodium-Merck.

G. D. Searle & Co. Sodium Morrhuate 5 per cent with Benzyl Alcohol.

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Non-official Remedies:

Diphtheria Toxin-Antitoxin Mixture, 0.1 L.—A diphtheria toxin antitoxin mixture (New and Non-official Remedies, 1933, p. 375) each cc. of which represents 0.1 L dose of diphtheria toxin neutralized with the proper amount of diphtheria antitoxin obtained from the horse; preserved with merthiolate 1:10,000. It is marketed in packages of three 1 cc. vials, in packages of one 10 cc. vial, and in packages of one 30 cc. vial. Hixson Laboratories, Inc., Johnstown, Ohio.

Diphtheria Toxin-Antitoxin Mixture, 0.1 L (Sheep). —A diphtheria antitoxin mixture (New and Non-official Remedies, 1933, p. 375) each cc. of which represents 0.1 L dose of diphtheria toxin neutralized with the proper amount of diphtheria antitoxin obtained from sheep; preserved with merthiolate 1:10,000. It is marketed in packages of three 1 cc. vials, in packages of one 10 cc. vial, and in packages of one 30 cc. vial. Hixson Laboratories, Inc., Johnstown, Ohio.

Diphtheria Toxoid.—A diphtheria toxin (New and Non-official Remedies, 1933, p. 384) prepared from diphtheria toxin by treatment with 0.4 per cent solution of formaldehyde. It is marketed in packages of two 1 cc. vials, in packages of twenty 1 cc. vials, in packages of one 10 cc. vial, and in packages of one

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30 cc. vial. Hixson Laboratories, Inc., Johnstown, Ohio.

Pollen Antigens-Lederle.—The following pollen antigen-Lederle (New and Nonofficial Remedies, 1933, p. 31) has been accepted: Plantain Pollen Antigen-Lederle. Lederle Laboratories, Inc., Pearl River, N. Y.

Metrazol Solution 10 per cent.—An aqueous solution containing Metrazol (New and Nonofficial Remedies, 1933, p. 301), 0.1 gm. per cubic centimeter. Bilhuber-Knoll Corporation, Jersey City, N. J. (Jour. A.M.A., April 8, 1933, p. 1105).

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Eatmor Cranberries General Advertising (American Cranberry Exchange, New York, sponsor).—Superior grades of fresh cranberries of various varieties bearing the trade mark "Eatmor" on the container label. They contain approximately 1.2 rat units of vitamin A (Sherman and Burtis) per gram. Vitamins B, D and G are not present in measurable amounts. It is a good source of vitamin C, about 3 to 4 gm. daily giving full protection from scurvy and promoting normal growth in guinea-pigs (Sherman, La Mar and Campbell). About 80 per cent of the vitamin of fresh fruit is retained in whole fruit cranberry sauce. The usual portion of cranberries is claimed to have little effect on the alkaline reserve of the body.

Arbitrator Patent Flour (Bleached) (Saxony Mills, St. Louis).—An "all purpose" soft winter wheat patent flour; bleached.

Bovril (Bovril, Ltd., London, England, manufacturer; Bovril of America, Inc., Camden, N. J., distributor).—A viscous mixture of beef extract, hydrolyzed beef protein, yeast extract, beef powder, salt, extracts of cayenne, white peppers and celery seed, and caramel. For the preparation of bouillon, for seasoning and flavoring gravies, soups, stews, sauces and other table dishes and for the diet of the sick.

Alerdex-Protein-Free Maltose and Dextrins (S.M.A. Corporation, Cleveland).—Essentially maltose and dextrins prepared by the proteolytic and diastatic hydrolysis of noncereal starch; free of protein coagulable by ordinary protein precipitation reagents; a spray dried nonhydroscopic powder. For use as a carbohydrate supplement to milk in infant feeding formulas. It is especially intended for diets planned to be free of cereal protein.

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JAMES Y. SIMPSON, M.D.,
Neurologist and Addictologist

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ORIGINAL ARTICLES

THE CANCER PROBLEM*

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In discussing such a subject as appears in the title of this paper, it can be approached from many angles. We shall touch but a few of these and will conclude our discussion with some recommendations that we trust will find favor with the Kansas Medical Society.

Cancer exacting an annual toll of more than 100,000 lives within the United States, of necessity becomes a major problem of public health. (Hoffman's statistics, 125,000). In 1900, it ranked sixth as a principal cause of death in the United States registration area; exceeded by tuberculosis, pneumonia, heart disease, nephritis and cerebral hemorrhage. In 1929, it ranked second, as the principal cause of death of this same area, exceeded only by heart disease.

In 1900, the cancer death rate for the United States registration area was 63 per 100,000 population. In 1929, it had risen to 96 per 100,000, a gain of 52 per cent in a 30-year period. (These are the statistics taken from the United States public health records, while the statistics taken from the statistical record of the Prudential Life Insurance Company, are somewhat higher, being—1900, 72 per 100,000; 1931, 121 per 100,000.) In the State of Kansas, in 1930, there were 1,818 deaths from cancer, a mortality rate of 96. An interesting side-light on these Kansas statistics is the fact that 674 of these cases were cancer of the stomach.

You will note from the above that the cancer mortality rate in the United

States has shown an increase of approximately 2 per cent each year, so that by this year the number per 100,000 is slightly above the one hundred point. (Hoffman's statistics 125).

This increase in number is probably due to two factors. First, an actual increase in the number of cancers due to an increase in the average length of life and secondly, an increase in the accuracy of diagnoses. As to the relative values of these two factors, one can only guess, but it certainly must appear to everyone that there is an actual increase in the number of deaths and consequently an increase in the economic importance of this question. There has been a continuing increase in the number of older persons among our population, and it is reasonable to assume that there will be a proportionately greater occurrence of cancer on this basis alone. Authorities, however, are of the opinion that a certain amount of the reported increase cannot be accounted for by a more accurate diagnosis and the lengthening span of life.

The cancer mortality rate in any given area generally equals about ten per cent of the total deaths from all causes in that area.

Unfortunately, no general cancer morbidity figures are available. It is usually accepted as a rough estimate, however, that the total number of cancer cases in any given area, during a given period approximate three times the total number of cancer deaths occurring. In other words there were in Kansas, approximately 2,000 deaths from cancer last year. It is fair to assume on that basis that there is slightly in excess 6,000 persons suffering from cancer at this time within the borders of our own state. If one was to attempt to compute this on purely economic basis, counting each life at \$10,000.00, the economic loss to Kansas, approximates \$20,000,000.00

*Read before the 75th annual meeting of the Kansas Medical Society, Lawrence, May 2, 3 and 4, 1933.

a year and to this sum should be added the cost of the care of the 6,000 that are living. The problem of such proportions merits very careful consideration not only by the laity but particularly by the profession. For certainly, the medical profession should point the way in all public health problems. I know of no question of greater importance either to the profession or laity than the question of cancer control.

The program of cancer control broadly consists of three divisions: (a) education, which involves the advancement and the dissemination of knowledge regarding cancer both among the general public and the medical profession; (b) research, which includes the study of the nature of cancer and the investigation of its causes, and (c) treatment which includes the establishment of diagnostic facilities and provision of the necessary equipment and personnel for modern cancer therapy.

Such a program challenges the thought of every public spirited citizen; when the state is embarking upon the problem of crippled children and upon the prevention of blindness, it might be well for the state to consider this problem of cancer. I think this is not at all an opportune time to offer such a suggestion, except for the purpose of securing for it a place in the thinking of public spirited citizens.

I take it that this is not a place to discuss the didactic side of lay education, but that it is rather a place to attempt, if possible, to emphasize the importance of this problem with the medical profession.

Material advance in the theoretical science of cancer dates from the opening of the twentieth century, when it was put on an experimental basis by the discoveries of Jensen and Loeb, that cancer in animals can be transplanted and made to grow like the original tumor. Previous to this time scientific knowledge of cancer was limited to the morphological identification and classification of the cancer cell, and to futile attempts to trace its cause to a specific bacterium or parasite. Theories of causation were rampant and included the familiar claims as to soil, climate, foods and so on, all of them unsubstantiated speculations.

The second great advance was the discovery, in 1914, by two Japanese investigators that cancer can be artificially induced in animals by the constant irritation of certain chemical substances, notably tar.

The third important advance was the demonstration by Slye and others that susceptibility to cancer in laboratory animals has an inherited basis, following definite genetic laws.

The fourth advance was the revelation by Warburg of certain chemical differences in cell metabolism between normal and cancer tissue, a discovery for which Warburg was awarded the Nobel prize.

These are the four starting points of most modern cancer researches.

TRANSPLANTATION

Conclusions from the study of transplanted cancers are necessarily limited since the animal is only a host for the engrafted tumor, and reacts somewhat differently to it than to a spontaneous cancer of its own. But valuable lessons have been gleaned from these cancers, two of which I shall mention. First, the biological identity of cancerous and normal cells has been established, since both follow the same laws for grafting, and both, when grown in vitro, exhibit the same behavior excepting that the cancer cell has a superior growth energy by virtue of which it surpasses and finally overwhelms the normal cells. Secondly, it has been shown by Loeb that transplanted cancer cells may stimulate to cancerous growth the neighboring normal cells of the host with which they are in contact. Here apparently is a discovery of the first magnitude that opens up a wide field of research. It suggests that cancer spreads not only by the propagation of its own cells, but also by the elaboration of a growth-inciting agent which has the power of inducing cancerous transformation in normal cells. This substance is apparently analogous to the filterable virus of the well-known chicken sarcoma of Rous, which entirely devoid of cells, reproduces the original tumor when injected into a normal fowl.

This particular phase of scientific research is by no means completed and is at present little understood.

ARTIFICIAL CANCER

The discovery that cancer can be produced in laboratory animals by certain chemical and physical-agents has revealed many valuable facts. Primarily, it has established the law that irritation is a complement and frequent excitant to cancer and has led to a rational prophylaxis that can be effectively carried out in certain accessible locations where cancer is proved to develop.

The irritation theory appealed at once to the popular imagination, so much so, that it is now a general belief that all cancers are the result of abnormal irritation, a view that must be somewhat modified in the light of modern knowledge of heredity.

Artificial cancer in laboratory animals provides an invaluable means for research in the problem of human cancer, since it has been proved beyond all possibility of doubt that human and animal cancer are biologically identical. Hence no proposed cancer remedy is nowadays seriously considered unless it has first stood the tests of animal experimentation. Finally in conjunction with studies in heredity, it has been shown that under the same conditions of irritation there is a difference of susceptibility to cancer-excitation in species, races, family strains, and individual organs. The difference ranges from an almost complete resistance to irritation, to a susceptibility so sensitive that the resulting cancer may almost be regarded as spontaneous.

HEREDITY

The doctrine that cancer has a definite heritable basis has been accepted with natural reluctance but its validity has been proved by thousands of experiments on animals extending over many animal generations. Since the biological laws that obtain in animals are shared by man it seems inevitable that human cancer must be a heritable trait. This most important phase is also the most difficult, for man, from the standpoint of heredity, is by far the most complex of all living creatures, and the estimation of special hereditary factors simple enough in lower organisms, is in him beyond the present power of mathematical computa-

tion. However, the knowledge that cancer is an hereditary disease is proving useful in many ways. It has explained away the fallacy of many old theories of the causation of cancer and is definitely pointing new directions for scientific research.

It is necessary to understand clearly what the expression cancer-inheritance means. It does not imply an inheritance of the actual disease, but rather the susceptibility to it. It also includes the opposite factor of resistance.

The two known exciting causes of cancer are then: (1) stimulation by irritation and (2) hereditary susceptibility. This is graphically expressed by Loeb's well-known equation, $C=H \times S$; or, cancer is the product of heredity by stimulation, the product being always the same, though the two factors may vary widely in proportion.

CHEMISTRY OF THE CANCER CELL

The discoveries relating to the chemistry of cancer are somewhat too technical to detail in this short summary. Suffice it to say that chemistry will probably be the medium by which the mystery of cancer growth will finally be solved.

So much then for the purely scientific aspects of the cancer campaign. I shall not review certain lines of investigation of a more practical nature.

STATISTICS

Statistical research is adding much to the knowledge of cancer, two items of which requires special mention—i.e., the incidence of cancer in animals and the question of whether human cancer is on the increase.

Cancer is being found in nearly all living species, including mammals, birds, fishes, lizards, even insects and possibly in plants. This does not mean that cancer is spreading rapidly among animals, but simply that it is being looked for there and widely disclosed for the first time. It suggests, rather, that cancer is an universal phenomenon of life and that it may have existed as such since life began.

The study of spontaneous cancer in animals and primitive races has done

much to explode the old, though still prevalent, theory that cancer is exclusively a human disease, and a product of modern civilization.

One of the most important problems that statisticians are seeking to solve is the question as to whether human cancer is on the increase. Much of the discouragement with regard to the final outcome of the conflict has been due to the common belief engendered by statistical figures that the disease is rapidly spreading. The question has not yet been settled but the general evidence tends more and more to refute this idea and to prove that the apparent increase in the disease is due to improved methods of diagnosis by which more cases are discovered, and to the greater longevity of the human race by which more people attain the cancer age.

TREATMENT

The frequent failure of the cancer remedies to which wide publicity is always given has created a popular impression that all cancer treatment is a failure. When a patient dies of cancer everyone knows of it. When a patient is cured of cancer few know it, and none like to admit it. The layman, therefore, hearing of many deaths and no cures is naturally apt to conclude that cancer is incurable. The number of cures is undergoing an encouraging increase each year.

Surgery and radium used separately or in conjunction to suit the individual case are the sovereign remedial agents.

EDUCATION

The immense educational cancer propaganda that is being carried out all over the world has as its one outstanding object the teaching of the importance of early treatment in cancer. Already much has been accomplished. People with curable cancers are appearing for treatment in greater numbers and this opportunity for earlier treatment accounts for the notable increase in the number of permanent cures.

At present we are for the most part dependent on recognition of the first sign or symptom and immediate investigation by the usual means of diagnosis. If this policy were universally carried

out, the mortality of cancer would be enormously reduced. But there would still remain the large number of cases in which symptoms do not appear until after the growth has passed the possibility of cure.

There is at present no royal road to the detection of early latent cancer. In its first stages cancer is apparently a local and not a general constitutional disease, and cannot be discovered by any known serological or general test.

All depends, therefore, on a keen recognition of the suspicious case and prompt recourse to biopsy or other means of diagnosis. It must always be borne in mind that a cancer that gives signs, is, from a biological standpoint, already advanced, though not necessarily incurable. The policy, therefore, of waiting in a suspicious case "to see if cancer develops" is only too frequently fatal to the patient, and always an inexcusable form of advice on the part of the attending physician.

In an effort to impress the importance of complete and thorough investigation of suspicious cases, I cannot resist the reference to some statistics recently published covering the question of cancer of the stomach. There were two studies published, at about the same time. Those of Dr. Gatewood, based upon a review of the cancer of the stomach cases, treated at the Presbyterian Hospital, Chicago, and a study published from the Mayo Clinic. The interesting thing about these two reports is how nearly their statistics tally. The startling thing was, that at the time the cases entered the hospital, 50 per cent of them were obviously inoperable and of the 50 per cent that were subjected to operation only in one-half of them—could any type of curative operation be undertaken. Which means, that at the time these cases presented themselves for definite treatment, 75 per cent of them were too late. The encouraging side of this fact, is that of the 25 per cent in which resection was undertaken, nearly one-half of them were still alive at the end of a five year period and a slightly less percentage were still alive at the end of a ten year period.

One cannot review the statistics of the

last 25 years, without a feeling of optimism. From one source comes a study of, "The Avoidable Delay," in cancer in general. This study reveals that in 1900 to 1904 23 per cent of the patients coming for treatment had had symptoms for three months or less. While in 1927, this percentage has been increased to 34 per cent, an improvement of 11 per cent or almost 50 per cent more patients coming with only three months delay period. When this is divided between the males and females, the women show a greater increase. More effort has been placed upon the education among women. Recent figures from the study of cancer of the breast, in most of the larger surgical clinics of the world, show that in advanced cases, 30 per cent of the patients are still alive at the end of a five year period. That in those cases that show no axillary gland involvement, this percentage of five year cures has increased to approximately 70 per cent. One large clinic recently reported 273 patients still alive at the end of a five year period, following resection of the stomach because of a cancer of the stomach and 128 cases still living at the end of a ten year period. Cancer of the womb divided into two groups, cancer of the body of the womb showed 76 to 88 per cent five year cures. Carcinoma of the cervix does not show such a favorable figure, but with the development of the method of treatment by radium and *x*-ray during the past 15 years, there has been a marked increase in the percentage of five year cures in these carcinoma of the cervix cases. In malignancy of the ovaries, the Massachusetts General Hospital, recently published a survey which showed 50 per cent of five year cures. Cancer of the rectum showed a 55 per cent five year cures, while carcinoma of the remaining portion of the large bowel, showed approximately 20 per cent of five year cures. These statistics should encourage everyone to greater diligence in the study of suspicious cases.

SUGGESTION

Your cancer committee desires to recommend for your consideration the following: Early in February of this year, Dr. Hassig, the secretary of the state so-

ciety and myself had a conference with Dr. F. L. Rector, field representative for the American Society for the Control of Cancer. This society, only a few years ago, underwent a rather careful reorganization and its work is now under the direction of a Board of Directors, the chairman of which is Dr. James B. Murphy; Dr. Geo. H. Bigelow, president; Dr. James Ewing, vice president, and Dr. Burton J. Lee, secretary. The reason for mentioning the officers of this Board, is to show that the American Society for the Control of Cancer, is to a large extent in the hands of the medical profession. This society has conducted for a number of the state societies, a state wide cancer survey and we are recommending to the state society, that the Kansas society conduct such a survey. The active work of the survey to be done by the American Society for the Control of Cancer, without expense to the state society. The report that would grow out of such a survey will be made to the state society and any publication of this report or any use made of the report will be under the control of the state society. We are in a more formal manner making this recommendation to the House of Delegates.

—R—

The Female Sex Hormones.—Until recently, therapy employing so-called female sex hormones was limited largely to the use of desiccated ovarian products and various extracts without demonstrated values. Today the physician has available preparations of demonstrable potency in animals and of possible usefulness in human beings. Two, isolated in crystalline form, have been given the nonproprietary designations theelin and theelol. The Council on Pharmacy and Chemistry has published a comprehensive analysis of the status of female sex endocrine therapy, particularly with estrogenic preparations. In few branches of physiologic research has experimental work progressed as rapidly as in this field, but clinical observations have not kept pace. Unfortunately, many of the products were submitted to uncontrolled clinical observations; inevitably this reacted to the discredit of endocrine therapy in ovarian and related disorders. Research with estrogenic substances, as the report of the Council on Pharmacy and Chemistry brings out, has been hampered by the confusion resulting from inability to compare the potencies of preparations used in different laboratories. Recently, however, the Health Organization of the League of Nations has undertaken to establish an international standard for such products. It will, of course, take time for the work of the League's committee to reach consummation; but the action is a commendable step in the direction of greater comparative accuracy. (Jour. A.M.A., April 29, 1933, p. 1342.)

CARCINOMA OF THE COLON*

H. L. SNYDER, M.D.

Winfield, Kansas

Carcinoma of the colon is apparently on the increase due to two probable factors: first, man's expectancy has gradually lengthened carrying a greater proportion through the cancer age, and second, with more careful analysis of cases, with a greater knowledge by the laity coupled with more exact diagnostic methods through careful *x-ray* examinations, these cases are recognized where they were formerly overlooked. Irritation seems to be the exciting cause. They are most frequently seen after 40 years of age. Authenticated cases, however, have been reported as early as the age of 15. There is a slightly greater frequency in males than in females. These growths are usually single although they may be multiple, particularly when multiple polypi undergo malignant change. They also occur as multiple primary lesions. The most common sites in the order of their frequency are: the cecum, the sigmoid, the hepatic and the splenic flexures, the transverse, the descending and the ascending colon. They most often originate on the posterior wall. They have a tendency to remain local growths; metastases do not occur early. The growth usually starts in the wall of the bowel, extends, infiltrates, the mucous membrane sloughs as the beginning of ulceration. Metastases occur late through the lymphatic system usually.

These growths are of the adenocarcinoma type of which three principal varieties have been described by Alexius McGlannan in Lewis' Practice of Surgery. We are using this classification because of its simplicity and we believe that classification is the best. They are: the adenocarcinoma cylindricocellulare in which the cells are cylindrical epithelium which form an atypical glandular mass. These cells are very slightly changed from the normal epithelium. The glandular arrangement is preserved in the metastases which occur quite late in the course of the growth. The second type,

the adenocarcinoma cubocellulare, proliferates in the form of solid tubes. These epithelial cells grow more rapidly, quickly infiltrate the bowel wall and metastasize to the lymph glands and distant organs. This type seldom obstructs and is much more fatal than the first type, the cylindricocellulare, which frequently does cause obstruction. The third is the carcinoma solidum, the end product of the local growth of the first two. Naturally, metastases to the lymph glands and other organs will have occurred, making prognosis hopeless. All of these varieties at times contain gelatinous or mucoid material and when present increase the tendency to spread on the serous coat of the bowel and metastases to various parts of the peritoneal cavity.

The prognosis in these cases, if subjected to surgery and the growth is local, is favorable. However, when metastases to the peritoneum, the other abdominal organs or deep lymphatics are involved, it is incurable. The route of metastasis is somewhat interesting, the spread from the cecum being to the lymphatic glands of the mesentery, to the small intestine and to the supraclavicular glands, the liver and pancreas escaping. Those from the hepatic flexure go to the liver, stomach and supraclavicular glands. Tumors in the sigmoid most frequently metastasize to the liver. The first year after operation records the most recurrences but they may recur as late as five years afterward and the time element is the answer in each case. Statistics lead us to believe that more than half of these patients, with proper radical operations, live three years or more.

The first and most common symptom occurring in an individual past middle life, who has been free from digestive symptoms, is a disturbance of the bowels. It may be constipation or diarrhea, or these may alternate. This symptom alone should immediately excite suspicion and call for the most complete examination to determine its cause. Pain of a crampy character with colic and soreness quickly is super-added to the first symptoms. In right-sided growths diarrhea is apt to be the rule and obstructive symptoms appear late if ever. Obstructive symp-

*Read before the 75th annual meeting of the Kansas Medical Society, Lawrence, May 2, 3 and 4, 1933.

toms occur with the left-sided growths accompanied with gaseous distention and discomfort, nausea and vomiting may occur in both. The right-sided growths simulate acute or subacute appendicitis but there is little muscle spasm and less local tenderness and constitutional reaction than with appendicitis producing the same amount of pain.

Starting with the disturbance of the bowel there is a progressive weight loss, loss of strength and a gradually increasing anemia. The presence of a palpable tumor should be considered a late symptom. The anemia is caused from toxic absorption or loss of blood, is most marked in cancer of the right side for these growths become larger before recognition. Blood, pus and mucous are found in the stools. The mucous membrane of the rectum upon inspection appears normal. An *x-ray* examination by flat plate will sometimes demonstrate the presence of a growth because of the gaseous distention above it and the visualization of a barium enema by fluoroscopy added to the above findings should locate the site of the lesion. A barium meal is not advisable for fear of complete obstruction. Blood is common in the feces in cancer, seldom present in diverticulitis, which with tuberculosis of the intestine, must be differentiated from cancer. Tuberculosis elsewhere would lead one to suspect tuberculosis in the colon but cancer may be coexistent with tuberculosis of the colon.

The treatment is surgical and in the absence of metastases, adhesions or involvement of other viscera or of the great vessels, offers more hope than in the treatment of any other internal malignant growth. It is not the object of this paper to take up the technique of the various operative procedures. Suffice it to say that this operation should first eradicate the growth and adjacent lymph glands, and second, should restore the continuity of the bowel if possible. In certain types a permanent colostomy may be imperative. Regardless of the procedure, vigilance must be exercised to maintain a good blood supply to the remaining bowel. These patients, unfortunately, do not all appear in time for a

radical removal with the hope of cure. However we have been able to trace three cases, one annular growth of the transverse colon, two with annular growth of the sigmoid and all having metastases to the liver, who lived from one and a half to three years after resection. Their preoperative care is most important, blood transfusions, the administration of fluids, proper cleansing of the bowel, a preliminary enterostomy, cecostomy or colostomy may be necessary to overcome toxemia and make them an operable risk. Unfortunately, a great many of these cases come in as a terminal obstruction, advanced in years and the most that can be done is some palliative procedure. The use of *x-ray* and radium is but palliative as they have but little effect on adenocarcinoma.

Analysis of cases: We have three known cases living that had carcinoma of the colon that were operated upon in 1916, 1918 and 1926 who are well and symptom free now. We have checked our records for the past five years and find thirteen cases with none living. In this group six came in as a terminal obstruction, six cases had metastases. Twelve of these were explored and these thirteen cases lived from four hours to three years. The case that was not explored lived one year.

CONCLUSION

First. Carcinoma of the colon is not recognized soon enough.

Second. Every so-called case of anemia, primary or secondary, with a bowel disturbance in a person past middle life should be considered a potential carcinoma somewhere in the alimentary tract until proven otherwise.

Third. The symptom complex of bowel disturbance, constipation, diarrhea or both, pain varying from soreness to acute colic, gaseous distention with obstructive symptoms, and with blood, pus and mucous in the stool, with a coexisting, gradually increasing loss of weight and strength with anemia in a person past middle life, should be as familiar to every practitioner of medicine as the cardinal symptoms of an acute appendicitis or diphtheria and should always suggest carcinoma.

Fourth. The fact that must be impressed upon all of us is that all of these cases can be cured if recognized early.

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CARCINOMA OF THE BREAST*

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Of the true tumors of the breast 95 per cent fall into two groups, fibroadenoma and carcinoma. The former constitute about 15 per cent, the latter 80 per cent. Every tumor of the breast should be regarded as malignant until it has been proved to be innocent and the only way to make certain is to make an exploratory incision and judge either from the gross or from the microscopic appearance. An early carcinoma may so resemble a fibroadenoma clinically as to deceive the most experienced surgeon.

The breast shares with the uterus the distinction of being the commonest site for carcinoma; about 40 per cent of all carcinomas occur in this gland. It is a disease of the involuting breast, being commonest at the time of the menopause, and rare before the age of 35. It may, however, be met with at any time after the twentieth year and some slow forms may last for five, ten or even fifteen years.

As is natural in an organ like the breast, the tumor presents marked variations in physical appearance, rapidity of growth and histological arrangement; as a consequence a great number of names have been applied to the different varieties. Deaver and McFarland give a list of 54 names which they have found in the

literature. In general terms we may say that the carcinoma may be spheroidal-celled or columnar-celled. The former arises from the epithelium of the acini and is a carcinoma simplex, the latter arises from the epithelium of the ducts and is an adeno-carcinoma. It is wisdom to adopt a simple classification for clinical use. The following is a classification as given by Bevan:¹

Simple carcinoma, a concrete palpable mass made up of the ordinary amount of both epithelial cells and connective tissue.

Scirrhus, or hard carcinoma, with a preponderance of connective tissue.

Medullary, or soft carcinoma, made up largely of epithelial cells and a sparse amount of connective tissue.

Diffuse carcinoma, involving a large part of the entire breast, often without a definite concrete palpable tumor.

Adenocarcinoma with marked tendency to reproduce tubules lined or filled with carcinomatous cells.

Squamous celled carcinoma.

Colloid carcinoma.

Carcinomatous cysts.

Paget's Disease.

The etiology of cancer of the breast is unknown. Two factors are often mentioned, trauma and chronic mastitis. There is no proof that trauma bears an etiological relationship to cancer of the breast. It is true that a history of a blow may frequently be obtained, but the breast is a superficial organ which must receive countless blows of which we hear no more. If trauma is a factor to be considered it is likely that the blows are physiological rather than physical.

Nor can it be said that the relationship of chronic mastitis to carcinoma has been set on a firm basis. It is true that as cancer does not develop in healthy tissue a condition of chronic mastitis may lay the breast open to attack.

At the present day there is no question more interesting and more vitally important in breast pathology than the relationship of chronic mastitis to carcinoma. It is interesting because opinions vary so enormously. It is important because the surgeon has to decide whether or not he will perform a mutilating operation

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to safeguard his patient against the future possibility of cancer.

The modern tendency is to regard cystic mastitis as a dangerous and precancerous condition, and some surgeons treat any cystic condition in the breast in the most radical manner lest a worse thing should befall their patient. Such an attitude is entirely indiscriminating, and reduces the surgeon to the level of a mere operator. A mutilating operation should not be performed unless there is very good reason for it.

It has never been proved pathologically that chronic mastitis can become converted into a carcinomatous process. The epithelial hyperplasia is no more malignant than is the hyperplasia of goiter, although both bear some resemblance to a neoplastic process. The fact that the two are not infrequently combined counts for nothing. Chronic mastitis in some degree is so common that it would be remarkable if it were not occasionally associated with carcinoma.

Moreover even if carcinoma and chronic mastitis are associated, what proof is there that the former is caused by the latter? It is more probable that the opposite is the case. Chronic mastitis is associated with such breast lesions as fibroadenoma, gumma or tuberculosis, where it is certainly an effect rather than a cause. The same is most probably true of carcinoma also.

It must be admitted that such distinguished observers as Ewing and Sir Lenthal Cheatele are strongly in favor of the view that chronic mastitis is a precancerous condition. In this respect, however, the only really satisfactory evidence is that provided by clinical results over a long period of time and correlated with pathological findings. From this viewpoint there is no work so satisfactory as that embodied in Bloodgood's recent paper.

Here we have a series of 350 cases of chronic mastitis, treated in many instances by conservative removal of only the part involved, and with subsequent histories extending in some cases for 29 years. "Among the 350 cases of chronic cystic mastitis of the various types here described we have had an opportunity to

study the entire breast in 222 cases in which it was removed. In not a single instance have we found gross or microscopic cancer. The same is true of about 600 benign breast lesions other than those discussed here. Many of these breasts were unnecessarily removed. The development of cancer in the breast after the removal of a zone of breast the seat of chronic cystic mastitis is apparently not more frequent than the normal incidence of cancer in the same number of women at the same age who had not been operated on: three out of 128 cases—about 2 per cent. My conclusions are that chronic cystic mastitis is not a lesion of the breast which at the present may be considered precancerous, and its presence does not demand either the complete excision of the breast, or the complete operation for cancer."

That cancer of the breast is curable and that cancer of certain types and in certain regions of the body is more amenable to treatment than in others are established facts.

Because it is not a vital organ and owing to its anatomical structure, the breast lends itself readily to thorough examination and complete removal. This was convincingly demonstrated at the St. Louis meeting of the American College of Surgeons 1932. In the symposium on the "Curability of Cancer" the number of cancer cures, 5 years and more, reported, totaled 8,840; of this number 3,634 were cancer of the breast.

The objectives of the St. Louis Symposium as given by Franklin H. Martin² seem pertinent here. They are in part as follows:

1. To impress upon the practitioners of scientific medicine and indirectly upon the public, the fact that carcinoma is curable by the use of well known and established methods of treatment.

2. To point out in a convincing manner that if all cases of cancer could be diagnosed early and treated promptly in their incipiency, the annual death rate from the disease, now recorded as 150,000 in the United States and Canada, would be reduced by at least 33 per cent, or 50,000 per year. Even if only half of the cancer cases could be diag-

nosed early and properly treated, the death rate would be reduced by 25,000 per year.

3. To convince the profession and the public that even though cancer is already apparently in a later stage of its development, if it is subjected to proper treatment, its progress may often be stayed, and the disease not infrequently cured; to make these facts so obvious that a general policy will be established to treat systematically every case of cancer, in whatever stage of advance, not only because of the immediate or remote possibility of a cure, but because palliative measures would bring great encouragement and relief of distressing symptoms.

4. To establish a universal policy among physicians and surgeons of reporting cancer cures rather than to present the involved comparative statistics that dwell particularly on the cases not cured.

Early diagnosis is the one condition upon which a cure of cancer of the breast depends. Women with breast tumors are seeking advice much earlier than they did 20 or 25 years ago but many of them do not come soon enough, and this in spite of the widespread propaganda both written and given over the radio urging women to report to their physician any trouble developing in their breasts. Many of these lumps in the breast are found accidentally by the patient and since they cause no special pain or discomfort at first, the surgeon is not consulted.

This fact was impressed on the writer recently while visiting a clinic in Bell Memorial Hospital, Kansas City; a number of cases of cancer of the breast were shown. The majority of these patients stated that they had discovered their lump accidentally. In view of these facts the statement made by Kirby³ is very much worth while, "All physicians should tell all their female patients and all women whom they can advise, to examine their breasts on the first day of every month and if they discover a lump to go at once to their physician and insist on a surgical consultation. We should then see our cases of cancer when the growth was not more than four or five

weeks old and could then show a very much higher percentage of cures."

Symptomatology: Unfortunately there are no demonstrable symptoms of cancer of the breast in its earliest stages. This places upon the physician the grave responsibility of recognizing, as far as our present knowledge will permit, the pre-cancerous stages or conditions which may eventually lead to cancer, in order that he may urge their prompt treatment. The absence of pain in the early stages of the development of a cancer is one of its marked characteristics. Later in its growth, however, when the skin is obviously involved and glandular metastases have taken place, pain may become a severe and distressing symptom, although very extensive involvement may be accompanied by little or no pain.

Teahan⁴ states, "Lumps may be situated in any portion of the breast or even in the lowest part of the axilla. Those which are malignant will feel fairly firm and may have a slightly irregular surface. Not every lump in a woman's breast is due to cancer. There is, nevertheless, a safe rule to follow, which is: that every lump must be considered malignant until it is proved otherwise. If the lump is cystic and contains clear fluid it is benign. Transillumination by means of the Cameron light, as advocated by Cutler, is helpful in making a differential diagnosis. A tumor which does not transilluminate clearly is much more apt to be malignant. If, in addition to a doubtful tumor in the breast, there are palpable glands in the corresponding axilla, the tumor is almost invariably malignant. Attachment of the tumor to the skin, whether or not there is definite dimpling of the skin, is indicative of malignancy. A tumor adherent to the underlying muscle is, likewise, malignant; while two or more lumps in the same breast are more likely to be due to chronic, cystic mastitis, than to cancer.

"A discharge from the nipple, in the absence of lactation, demands careful follow up. When there is a discharge from the nipple, and palpation of the breast discloses a tumor either beneath the nipple or in some part of the breast, malignancy must be strongly suspected.

Occasionally, a benign tumor beneath the nipple will cause a bloody discharge. Ulceration or erosion of the nipple, as of the skin elsewhere, must also be regarded with suspicion. A retracted or inverted nipple should cause one to look for an underlying tumor, and if one be found, the condition is almost always malignant. In instances of 'hard areas' or unilateral enlargement, if a tumor in the breast is not found, the breast is not the seat of malignant disease.

"Pain in the breast, without other signs, is of no significance in early cancer diagnosis, although it is almost always present in advanced cancer. Occasionally, because of pain, a woman will examine her breast and discover that a lump is present. From the standpoint of cancer diagnosis, it is the lump that is important, for pain without other signs is generally due to some functional disturbance of the breast."

Axillary involvement, fixation of the tumor, bleeding from the nipple, retraction of the nipple, ulceration of the skin and cachexia are sometimes referred to as the classical symptoms of breast cancer. Bunts⁵ declares, "It would be better to discard this classification entirely, however, for if one waits for the development of these classical symptoms the last chance of surgical relief will have passed. These can only be regarded as symptoms either of aversion of the sufferer to securing aid or of professional ignorance or negligence."

Prognosis: Aside from the general fact that the prognosis in any individual case of cancer of the breast depends upon the stage of the growth, the extent of the involvement, two outstanding factors which affect the prognosis should be noted: When cancer is present in a lactating breast its course is exceedingly rapid and it progresses to an early fatal termination, whatever treatment is instituted. In general, the earlier the age at which a cancer of the breast occurs the more rapid is its development and the more probable the fatal outcome. In the aged, on the other hand, a small scirrhous tumor about which has developed such an obstructing wall of dense fibrous tissue as to check its growth, may be

present for years without demonstrable extension and, as has happened in a few reported cases, its malignant characteristics may even be destroyed so that a spontaneous cure results.

Adair⁶ states that the most outstanding problem of breast cancer is the question of how to successfully treat the axilla. "It is the only area of metastasis where we may still hope to obtain a cure after metastasis has occurred. . . . The operable cases (those having cancer only in the breast or those with cancer in the breast as well as the axilla) average about 35 per cent five-year cures by surgery alone. As would be expected, this figure varies widely with the different authors. . . . Bloodgood's figures will probably represent a good cross-section of surgical results in America; namely, 70 per cent five-year cures in those cases having no axillary involvement, and 20 per cent in those having definite axillary disease. He has gone a step further than most in the study of the axillary material removed. He draws an imaginary line between the outer, middle and inner thirds of the axillary contents. His microscopic studies reveal that there were 25 per cent five-year cures where the outer (lower) third was involved; 15 per cent of those cases with the middle third involved, and only 10 per cent cures for the inner third. It brings out clearly the importance of the exact site of metastasis into the axilla.

"It is not possible for any clinician to state with any degree of certainty whether or not the axilla is involved unless the nodes are comparatively large. It takes more than a casual routine examination on the part of the pathologist to determine whether or not the axilla is involved. It is necessary for him to examine several nodes microscopically."

Willy Meyer⁷ states, "At first, a patient should be inspected in the upright posture to see whether there is any asymmetry between the two sides, any evidence of a local swelling or dimpling of the skin and especially to note the relative position, level and direction of the nipple. It is important, if the breasts are of equal size, to note whether the nipple is retracted or not, and then to see

whether the nipple is directed upward or downward or inward or outward by a pull upon its deeper structure. Transillumination of the breast with the electric light will often help to find a density in either of the quadrants. It is also of great importance to ask the patient to show where it is that she herself has found the swelling. At times it occurs that the swelling that the patient has noticed may not be the most important lesion to be discovered."

After inspection comes palpation, and Willy Meyer recommends palpation of the female breast preferably in the recumbent posture: "If one tells the patient to lie down and to turn slightly toward the opposite side of the breast, and then to place the arm up above the head, putting the pectoralis major muscle on the stretch, the entire breast gland tissue will thereby flatten out against the chest wall. It will not hang in a pendulous fashion, when one feels the breast hanging against the chest wall. In this recumbent position, the breast is completely relaxed and flattened against the chest wall, and it is much easier to palpate the breast. This ought first to be done by placing the hand lightly and flat upon the breast and with a gentle rotary motion one can pick up any gross nodule within the gland tissue. Hereupon one takes the fingers and starting in radially at about 12 o'clock very gently pull the fingers across the breast from the far periphery toward the nipple, through all the radiants of all the quadrants of the breast. In this way one picks up every slight nodule or enlargement that may be within the breast gland, be it a small or a large gland. Next the nipple itself is examined to see if there is any discharge, bloody or otherwise, and by gentle pull to see if there is any retraction or fixation to the deeper structure. If a nodule or tumor has been picked up in the breast by this examination, the next point is to map it out and define the character of the tumor, especially to note whether the skin is adherent to it or whether the tumor is adherent to the deeper structures and, finally, to determine the consistency of the tumor and the character of its margins, whether it

is sharply defined and circumscribed, or whether it has irregular margins with an infiltrating character. After notes have been made of the exact location of the tumor, according to the clock, that is 1 or 3:30 o'clock or 7 o'clock of the breast, or in which quadrant of the breast it is located, what its measurements are, and its distance from the margin of the areola, the next important examination is that of the remainder of the immediate cancer field.

"Following the examination of the breast itself, the lymphatic field should be examined with the patient in an upright posture with the arm held outward, almost at right angles to the body, in a relaxed condition, by lifting the elbow upon the hand of an assistant, which allows the examining hand of the doctor to enter the axilla right up to the apex and with a very gentle forward and backward motion and upward and downward motion against the chest wall even small lymph nodes can be made out. If no assistant is present the axilla may be examined by placing the tips of the fingers on the knee or table . . . lymph nodes may have cancer cells deposited in the perilymph node spaces or even within the lymph node itself, and occasionally lymph nodes may be solidly replaced with tumor tissue and still be as small as the head of a pin. It is impossible, therefore, always to state beforehand whether the regional lymph nodes are or are not involved in the malignant process. Therefore the prognosis must be carefully guarded as one is frequently disappointed in getting a pathologic report of involvement of the axillary nodes when clinically beforehand one could not diagnose them. It is important, also, to examine the supraclavicular triangle. This is best done with the patient in the recumbent position, as the apex of the pleura will rise higher with the patient lying than sitting, and by that fact the vessels are pushed upward and the node lying at junction of the internal jugular and subclavian vein is more easily palpated."

The skeletal metastases from mammary cancer have been investigated by M. M. Copeland:⁸ A survey of 1914 cases

in the Surgical Pathological Laboratory of the Johns Hopkins Hospital revealed 903 deaths, 757 by dissemination of cancer and 146 from other causes. In 89 in which death was due to cancer, lesions of the bone were found prior to death. In 100 cases, 58 were scirrhus, 6 adenocarcinoma, etc. The bones most often involved were, in order: Spine, pelvis, femur, skull, ribs and humerus, while in the forearm and lower leg were infrequent. Clinically, pain of a severe rheumatic character was important. When the foci were about the spine, girdle pains and many other neurologic manifestations appeared. Occasionally, pain preceded *x-ray* evidence of metastases from 3 to 18 months. The majority eventually showed a secondary type of anemia with its complications as disease progressed. The terminal phases were a progressive emaciation, usually with much pain; when lungs were involved (19 cases), respiratory embarrassment with spitting of blood and paroxysms of coughing were added features. Pathologic fracture occurred in 15 instances, 13 in femur, one in ilium and multiple fractures of ribs in the other.

As shown by *x-ray*, metastatic lesions of bone from carcinoma of breast were most often multiple, a single focus in only one-fourth. Most solitary foci were in vertebrae or femur. Two types of lesions were discussed (osteolytic and plastic). The osteolytic appeared more common, and in the long bone both types were often found well above the average entrance of the nutrient artery in femur and above or below it in humerus. Mottling representing an increase in density of the bone was often found within the areas of destruction, together with thickening of cortex above or below the metastasis, and microscopically this proved to be an attempt at osseous repair. The pelvis, vertebrae, skull, ribs, scapular, clavicles and sternum showed the same typical medullary involvement as femur and humerus. Lack of distortion or bending of bones was evidenced, due partly to the advanced stage of disease, partly to radiotherapy so frequently resorted to and partly also to the age of patient; fracture was therefore the rule.

The successful treatment of cancer of the breast depends upon complete eradication of the disease. Radical amputation of the breast is pretty well standardized and there is no need for me to discuss the technique here. We must include in the block of tissue removed the entire breast, the overlying skin widely, the pectoralis major muscle, the axillary glands and fat. Such authorities as Erdmann and Bevan find that the pectoralis minor should seldom be sacrificed, leaving it secures much better function; those cases offering chances of permanent cure, ample exposure to clear out the axilla may be obtained without destroying the pectoralis minor muscle.

Bevan states also the dissection of the axillary vessels and nerves should not be carried to the absurd extreme of removing every vestige of fat and areolar tissue which surrounds them because this is not good surgery, and when carried too far may be the direct cause of a lymphedema and a huge swollen arm; such extreme thoroughness seldom adds anything to the chance of a permanent cure.

"Removal of the supraclavicular glands should seldom be undertaken and if such dissection is made it should be of the simplest and safest character, removing by an incision just above and parallel with the clavicle the glands which can be easily removed without adding great risk to the operation. In spite of some early reports to the contrary, it is quite certain that few if any of these cases are permanently cured and it is better to recognize the operations done where there are palpable glands above the clavicle as palliative operations and treat the glands above the clavicle with radiation." Bevan believes that in suitable cases it is wise and proper and good scientific surgery to do radical operations which are recognized at the time as being palliative. "This must not, however, be carried too far."

Bloodgood has had a large personal experience with postoperative irradiation after operations for cancer of the breast in which axillary glands were involved. It has been his rule not to use irradiation when the axillary glands are not involved, so it must be distinctly

understood that his conclusions are based upon cases in which the chances of a five-year cure are about 20 per cent after operation only. He has been unable, in this group of cases, to find out that postoperative irradiation with deep *x*-rays has increased the five-year cures, or reduced the number of local recurrences.

His experience with preoperative irradiation is small. In a few of the cases a complete operation has followed. In a larger number, because of definite hopeless signs, no operation has been performed.

Bloodgood urges the ceasing of extensive surgery as a last resort in the treatment of extensive cancer of the breast. "Our experience with irradiation with deep *x*-rays, or radium in its different forms, is sufficient to justify us in using this non-operative treatment, for at least palliation. Incomplete operations for cancer of the breast never cure and often make the patient much more uncomfortable than after no treatment at all.

This report comprises a small group, 12 cases, of breast cancer; ages vary from 45 to 67, all had radical breast operation, all cases received a series of postoperative irradiation.

Of this series three are dead; one from cause other than cancer, two died from metastasis, one of these six years and eight months after operation. The first signs of recurrence about eight months before death was the enlargement of the suprascapular glands in the other side of the neck from the breast amputated. She also had backache and later showed evidence of skeletal and general metastases, no recurrence at site of operation.

The second case died two years and ten months after operation of general metastases which developed rapidly showing evidence of recurrence first in the supraclavicular glands about one year after breast amputation. This case received massive doses of *x*-ray with temporary relief. She had extreme skeletal and lung metastases and suffered a pathological fracture of right femur, while being lifted in bed, a short time before her death.

Of the remaining nine cases, two show evidence of metastasis at this time. One after six years; six weeks ago noticed an enlargement of the supraclavicular glands on the side of breast amputation. The other showed evidence of abdominal metastases after a year following the breast amputation.

The remaining seven are free from recurrence at this time; one after a period of eleven years, two six years and the last four less than five years but as two of these are unusual from a diagnostic standpoint, they are here reported:

One case, age 67, noticed a small tender lump in right side between breast and axilla about four weeks before presenting herself for an examination. This tumor was about the size of a hazelnut, somewhat tender on palpation, the skin covering swelling was reddened; nothing suspicious found in breast. She was advised to have this gland removed and examined; this proved to be a metastatic carcinoma. Radical operation for breast amputation was done and on removal of breast a small tumor, the size of a small lima bean, found; this proved to be a scirrhus carcinoma. Axillary glands showed no metastases.

The last case to report consulted me on account of a painful lump on her right breast; she had discovered this about six months before, when she had examined her breast on account of the pain; she consulted her physician who advised her to wait and see how the breast got along as the fact that she had pain was a pretty fair sign that the lump was not a cancer. However, the lump continued to enlarge and when I saw the case, was about the size of an English walnut, quite hard and firm. Radical operation was performed and the laboratory report showed scirrhus carcinoma with metastasis to the axillary nodes.

Sometimes, because of pain, a woman will discover a lump in the breast. From the viewpoint of cancer diagnosis, the presence of the lump is the important thing.

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THE BLACK WIDOW, SHOE BUTTON OR HOURGLASS SPIDER*

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This spider derives its name, Black Widow, from her habit of eating her mate. They are found throughout the United States but are more plentiful in the southern half.

The female is the larger as well as the more aggressive, as she does all the biting. She is about one-half-inch long and a quarter of an inch wide. Her color is coal black and shiny, with a globose abdomen on the ventral surface of which is found a red spot, usually in the shape of an hour glass. Often red or orange spots are to be seen on the dorsal surface of the abdomen.

This species, unlike the common field spider, which spins a nice smooth web in some conspicuous place, spins a coarse irregular web, usually in dark, unfrequented places such as lofts of outbuildings, under steps, around old lumber piles, in basements of dwellings and most common of all under the seat in the outdoor toilet.

The Black Widow is the chief and perhaps the only really poisonous spider in the United States. It has fangs and poison sac and is capable of expelling a colorless venom containing a highly neurotoxic element.

Persons may not know they are bitten as the sensation is much like the extraction of a hair or the prick of a pin, as no local reaction follows immediately; the spider is frequently not seen. However, a small wheal is present, on the apex of which a pin head sized puncture wound is found. Some itching and burning is noted at the time of the bite. A few hours later a purpuric spot may appear, soon followed by an area of induration and extreme soreness and frequently a slough occurs at the site. This may be caused by the venom or local infection for cases of pyelitis, cellulitis, septicemia

and erysipelis have been reported following the bite of a spider.

Of course pressing the spider against the skin would cause it to bite in self defense, but accidents from the bite of this spider are due largely to faulty discernment in tactile responses. When some portion of the body comes in contact with her web and thereby shaking it, she is inclined to respond in a seemingly senseless manner, attacking and biting the intruding object. Due to the fact that under the seat of the outdoor toilet is so common a place for her to be found, many of the reported cases in males have occurred on the penis or scrotum.

The general symptoms appear from ten minutes to several hours, depending upon the location of the bite. Often there is severe pain radiating from the site of the wound and finally extending over the entire body, accompanied by nausea, vomiting, dyspnea, persistent hiccough, profuse perspiration and urinary retention. Pain in the abdomen resembling acute indigestion, followed by a board-like rigidity simulating a perforated viscus is not infrequent. However, no local tenderness is present and often if the patient is placed in the prone position and pressure applied over the lumbosacral region the symptoms are relieved. There may be edema of the face; urticarial rash covering the body, accompanied by intense itching; increased blood pressure, leukocytosis and a fever which seldom reaches 102. The symptoms usually subside in a few hours and the patient is able to be out in two or three days. However, several deaths have been reported as resulting from spider bite.

The toxicity is manifested by vasomotor changes in the lumbar muscles, the muscles of the extremities and all the larger joints of the body. There also seems to be a disposition of the body to eliminate the products of this poison much slower than it does the venom of snakes.

The treatment is symptomatic and includes sedatives, elimination and stimulation. Hypodermic injections of morphine are indicated and usually very large doses are required; strychnine and caffeine are useful. Hot packs of a 50 per

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cent solution of magnesium sulphate over the region of the bite gives relief. Very good results have been obtained in the hospitals of Los Angeles by the use of convalescent serum but as yet no serum has been manufactured from lower animals.

The constancy of the symptoms and findings in spider bite is rivaled only by the diversity of the treatments that have been employed. More than 75 remedies have been administered, each with the greatest confidence that this was the best line of treatment. Yet the large doses of narcotics required to give adequate relief make it desirable to seek some more efficient form of treatment.

A brief summary of case reports may help to visualize the conditions encountered in a few reported cases.

An American, age 42, was admitted to the hospital with a tentative diagnosis of acute appendicitis. There was the history of a severe pain, starting in the scrotum and lower right quadrant, spreading over the entire abdomen; a board-like rigidity but no local tenderness; profuse perspiration; respiratory distress; urinary retention requiring catheterization; obstinate constipation; temperature of 100; leukocytes 21,800, and a trace of albumen in the urine. The suggested diagnosis varied from lobar pneumonia to food poisoning, ruptured gastric ulcer or acute appendicitis. However, the symptoms soon subsided and the patient remembered that he had been bitten on the penis about ten minutes before the onset of pain while in an outdoor toilet. Several days later he was discharged completely recovered.

A boy 14 months old was bitten on the back by a black spider while sitting on a wicker stool. He cried and continued to moan from pain even after he had been rendered stuporous by heavy doses of chloral and morphine. He developed urinary retention, board-like rigidity of the abdomen and edema of the legs. Six hours after he was bitten he received an intramuscular injection of 20 cc. of convalescent serum and was soon sleeping quietly. The following day he had practically recovered.

A factory worker, aged 16, was bitten on the back by a black spider while at work. He was admitted to the hospital suffering from aches and pains in the arms, legs and back which increased until the body was doubled up in agony; the abdomen became rigid and he was sweating profusely. The systolic blood pressure was 150; the white blood count was 12,600. Seven hours after he was bitten he was given an intramuscular injection of 15 cc. of convalescent serum which soon relieved him and he was able to leave the hospital the following day.

This patient first seen about midnight. She complained of excruciating pain in the abdomen and general aching over the entire body. Her symptoms were as follows: temperature 100; pulse 66; respiratory distress; profuse perspiration; board-like rigidity of the abdomen with no local tenderness, and nausea but no vomiting. She attributed her condition to acute indigestion. Next morning she presented edema of the face, an urticarial rash covering the entire body accompanied by intense itching, temperature 101, pulse 64, urinary retention, constipation but no rigidity of the abdomen. She complained of a painful area on the right thigh. An examination revealed a purpuric spot on the internal surface of the upper third of the thigh, about two inches in diameter with induration and extreme tenderness. The rash disappeared on the fourth day. About 14 days after the onset of her trouble a piece of necrotic tissue the size of the purpuric area and extending down to the deep fascia was removed and the wound was more than three months in healing.

In view of the fact that many patients present a clinical complex closely simulating an acute abdominal disease, such as extreme pain and board-like rigidity of the abdomen, several have been subjected to exploratory operations. In the absence of a known history, an excruciating pain extending over the entire body with severe abdominal symptoms and board-like rigidity without local tenderness, together with low grade fever, leukocytosis, high blood pressure, nausea, vomiting and constipation should suggest spider bite.

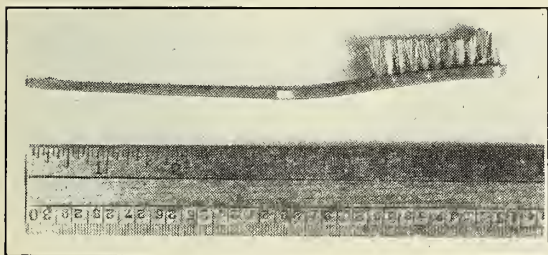
CASE REPORT

An Unusual Foreign Body in the Stomach

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Iola, Kansas

Miss G. C., age 18, came to the office with the complaint of having swallowed a tooth brush. Because of the seeming impossibility of the feat, she was questioned closely as to how the accident occurred. She gave as the explanation that while brushing the posterior portion of her tongue she caused herself to gag, threw her head back and with a deep inspiration the brush disappeared. She made attempts to grasp the handle in the back of the throat but with no success—also attempts to force vomiting were without results. She complained of no distress of any kind.

Her physical examination was essentially negative. The throat revealed no trauma, it being somewhat more roomy than average. Her pulse was 72, there being no evidence of excitement. Heart and lungs were negative. The abdomen was soft, easily palpated and to external examination was entirely negative.



An *x-ray* examination was made of the stomach and the brush found to be located under the left diaphragm. An operation was advised and performed the following morning. An additional *x-ray* was made just before the operation, revealing the brush in the same position as at the previous evening.

The operation consisted of a gastrotomy through a left rectus incision. The brush being removed with no difficulty. It consisted of the ordinary adult variety having fairly soft bristles.

Her post operative course was uneventful.

UNIVERSITY OF KANSAS MEDICAL
SCHOOL CLINIC***x-Ray* Therapy in the Treatment of Carcinoma of the Breast**

GALEN M. TICE, M.D.*

Our experience in treating cancer of the breast with deep *x-ray* therapy at the University of Kansas Hospital extends over a period of less than five years, so we do not feel justified in summarizing our cases and drawing conclusions. We are, however, convinced by clinical observation over a relatively short period that there is a lower percentage of recurrence in cases having had radical breast removal supplemented by deep *x-ray* therapy than in those who have not had the benefit of irradiation. We also feel that the inoperable case with supraclavicular, palpable nodes is definitely improved. It is true that they are seldom if ever cured, but their morale is raised by knowing that some one is trying to do something for them and they seldom develop fungating, infected carcinomas, which make their last days miserable. We feel that the enormous increase in cases referred to us for irradiation, since installation of adequate equipment, indicates that surgeons expect their patients to have a better chance with the combined treatment than with surgery alone.

A few prominent surgeons quote statistics purporting to show that *x-ray* therapy is of no value in the treatment of breast carcinoma. Harrington¹ in 1929 reviewed 1,859 cases from the Mayo Clinic and concluded that postoperative therapy is of little benefit. The majority, however, favor the combined treatment. Trout and Peterson² sent a questionnaire to 200 radiologists and 150 surgeons, asking an expression of opinion on this subject. Ninety-one per cent of the radiologists and 89 per cent of the surgeons expressed themselves as favoring the use of *x-ray* therapy. Portman³ of Cleveland reported a series of 345 cases treated by surgery alone with 23.1 per cent of five year cures and 92 cases treated with surgery and *x-ray* with an increase to 35.8

*Department of Radiology.

per cent five year cures. Pfahler and Parry⁴ in a series of 977 cases reported a general average of 53.5 per cent five year cures with the combined procedure. In the primary operable group, refusing operation, 85 per cent five year cures, and in the primary inoperable group 30.5 per cent five years cures, are reported with *x*-ray therapy only. Doderlein⁵ reports in the group with no glandular metastasis 46 per cent with surgery alone and 80 per cent with the combined treatment free from disease for five years. In the group with metastases, he gets 36 per cent five year cures with the combined treatment. It is interesting that few of the recognized radiologists in this country advocate treatment with *x*-ray alone. Even Pfahler with his high percentage of five year cures with *x*-ray alone, advocates surgical removal of the breast and glands when operable.

Preoperative irradiation has as its primary aim the devitalization of cells that may be missed by the surgeon or scattered during the operation. Postoperative therapy is based on the theory that we are treating remnants of cancer that cannot be seen or felt and, therefore, have not been removed. The common recurrence following operation shows that total removal in the average case is impossible. Our experience with inoperable cancer in which the primary mass becomes smaller and glands which were fixed become movable, causes us to believe that if the disease will disappear after it has grown to considerable size the same change will result in microscopic cancer. It has been shown pathologically that *x*-ray stimulates the formation of fibrous tissue. Cases have been described in which a patient who has been clinically cured of cancer dies of some other condition later. Autopsy has shown cancer cells firmly enmeshed in a mass of fibrous tissue. Ewing⁶ outlines the changes in metastatic glands following deep irradiation as follows:

1. A marked thickening of the glandular capsule.
2. Hornification and calcification of the gland.
3. Liquefaction necrosis of radio sensitive cells.

4. Enclosure of the less radio sensitive cells in a mass of connective tissue.

The technic varies in different clinics. Portman feels that high voltage over the chest lowers the patient's resistance and encourages early metastasis. To avoid damage to the lungs, heart and circulating blood stream he uses moderate voltage over the chest so that the maximum irradiation of the chest wall is secured with the least possible irradiation of the underlying structures. Deeper penetration is used over the supraclavicular and axillary areas. Pfahler uses high voltage and a "saturation" technic, keeping the patient under treatment for a considerable time. This technic is very plausible to us as it permits irradiation of cells during the process of growth and cell division. Our technic consists of cross firing the tumor area, axillary and supraclavicular glands. Approximately 900r units are delivered to each skin area, using 200 KvP, 5 ma., and $\frac{3}{4}$ mm. cu. and 1 mm. al. filtration. If clinically the tumor is considered to be malignant this course is given preoperatively and the breast is removed within a few days after the series is completed. If there is a reasonable doubt as to the malignant character of the tumor we wait for the biopsy report and irradiate if indicated. The patient is asked to return for a second series approximately eight weeks after the first treatment, at which time she is seen in consultation with the surgeon. The third series is given after an interval of three or four months. Subsequent series are given at lengthening intervals.

Since pre and postoperative therapy has become routine with us we have observed only two cases with recurring skin metastasis. One of these cases was so far advanced when first seen that she refused therapy. The other case showed prompt recession of the skin nodules under moderate doses of deep therapy.

There are few ill effects or complications directly attributable to properly administered irradiation. Radiation sickness following treatment of the chest wall is transient, mild and sometimes not observed at all. Lung fibrosis very definitely occurs following prolonged treatment, but in our experience has been of

no clinical significance. Swanberg⁷ reports a typical case of post-radiation fibrosis with no symptoms but in which the radiograph shows marked fibrosis. Portman³ feels that the patient's resistance may be lowered by prolonged irradiation of the blood stream. Harmful effect on the myocardium is suspected but not proven. Impaired healing where surgery follows immediately after *x*-ray therapy has been mentioned by some but has not been seen in this clinic.

CONCLUSIONS

Based on clinical observations over a relatively short period of time and on the statistics of five year cures published by recognized surgeons and radiologists, we feel that pre and postoperative deep *x*-ray therapy is of distinct value in treating carcinoma of the breast. In inoperable tumors it offers the only hope to the patient that her life will be prolonged and that her final days will not be days of misery. It is concerning this inoperable type that Dr. W. J. Mayo has stated "radiotherapy is at its best a triumph and a despair." The patient and her family have been told that surgery has nothing to offer. Often the patient responds to treatment so well that despite the pessimistic prognosis of the radiologist they hope for a cure. Eventually the patient dies after having been carried along in comparative comfort for one, three or five years and radiotherapy is blamed for not effecting a cure instead of being given credit for having prolonged life.

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Obscure cases of pernicious anemia may be diagnosed by comparing the effectiveness of gastric juice from the patients in question with that from normal persons when fed to patients suffering from pernicious anemia.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

Does a primary tuberculous infection afford adequate protection against consumption? That is the challenging question asked by Chester A. Stewart in a recent article. He answers in the negative, thereby disagreeing with those who hold that "a little tuberculosis is a good thing." His conclusions are based largely on observations on 84 children, who developed consumption, in a series of more than 10,000 cases examined and followed up at Lymanhurst School in Minneapolis.

Tuberculous Infection

Initial infections with tubercle bacilli are so common that most persons remain ignorant of the fact that they have primary tuberculosis until its presence is revealed by a positive tuberculin reaction. Nonallergic individuals apparently possess a remarkable ability to repair extensive as well as slight damage wrought by a first invasion of tubercle bacilli. Tuberculosis of first infection may be regarded as a benign disease whose prognosis is good and which rarely causes death.

Regardless of how one may interpret the process whereby the body "resists" the first infection by tubercle bacilli, it is important to determine whether this first infection enhances or impairs the normal mechanism of resistance with which man is endowed to combat the disease.

Of the slightly more than 10,000 children examined at Lymanhurst School for tuberculous children during the past decade, 84 were found to have consumption (reinfection pulmonary tuberculosis), classified as follows:

Group I—Four children (5 per cent) whose initial examinations were negative but who had reinfection pulmonary tuberculosis (adult type) on reexamination.

Group II—Nineteen children (23 per cent) with reinfection pulmonary tuberculosis when first examined but no evi-

dence of primary tuberculosis (childhood type).

Group III—Twenty-five children (29 per cent) with primary and reinfection pulmonary tuberculosis coexisting when first examined.

Group IV—Thirty-six children (43 per cent) with primary tuberculosis exclusively on first examination in whom reinfection pulmonary tuberculosis later developed.

ANALYSIS OF GROUPS

No significant conclusions seem warranted on the basis of data available in Group I. The observation made on Group II failed to reveal the sequence of events which led to the condition and therefore failed to contribute evidence for or against the notion that primary tuberculous infection affords protection against consumption.

Group III, however, in which primary tuberculosis was found coexisting with reinfection tuberculosis provides circumstantial evidence that primary infections frequently fail to prevent the development of phthisis. This evidence is supported by the observations of Group IV, whose records are known with sufficient detail to prove that primary tuberculous infections do not prevent phthisis from developing, and to indicate that first infection by tubercle bacillus alters the normal state of resistance possessed by the uninfected body in such a manner that, instead of again being able to experience the benign form of the disease, the patient is doomed thereafter to have some reinfection type of tuberculosis (consumption and the like) develop, if successfully reinfected.

These thirty-six children, when first seen, gave positive tuberculin reactions, and on roentgen examination their films were normal in nine instances, revealed calcified hilus lymph nodes in fourteen cases, and Ghon tubercles associated with calcified hilus lymph nodes in the remaining thirteen cases. In no instance was evidence of reinfection types of tuberculosis found in this series of thirty-six children coexisting with the primary disease present at the time they were first examined. At that time, therefore,

each child in the group had tuberculosis of first infection exclusively, visualized by roentgen examination in twenty-seven cases and not revealed in the remaining nine instances. Subsequently, these thirty-six cases (Group IV) were followed and repeated examinations were made, and after varying periods of observation a reinfection type of tuberculosis (consumption) developed in each child in this group.

A typical case selected from the general group illustrates the development of consumption postdating and superimposed on a preexisting primary tuberculosis. A girl with a positive tuberculin reaction and four calcified Ghon tubercles demonstrable by roentgen examination made in 1926 remained in good health for years, but in 1930 a new subapical infiltration appeared on the right. Later this lesion progressed and now, after two years of sanatorium care, hers is classed as a moderately advanced case of consumption. Her multiple protective foci have failed to protect her adequately.

Obviously, the Group IV cases, (43 per cent) provide proof that their primary tuberculous infection *failed to prevent consumption*. This proportion of failures rises to 72 per cent if Group III is included. Lack of detailed information available in Groups I and II explains, the author suspects, why this failure to protect cannot be measured at 100 per cent. Opie, by autopsy found lesions of primary tuberculosis in all cases presenting a reinfection type of tuberculosis.

REINFECTION, THE ESSENTIAL FACTOR

At Lymanhurst to date, no case proved to be consumptive as a direct result of a first infection, has been found, and no case of a second crop of primary lesions has yet developed in an allergic child. This evidence, together with the observations of Opie, reveals exactly what is needed to become a consumptive, namely, reinfection on tissues previously sensitized by a primary infection. If that is true, artificial immunization with an attenuated organism (BCG) alters the normal status of the uninfected body and creates the danger that a crop of unne-

essary consumptive patients may be harvested when the vaccinated children reach puberty, and later. Certainly several years of observation will be required before the value of artificial immunization can be definitely settled.

The term "childhood type of tuberculosis" adopted some years ago by the National Tuberculosis Association is not entirely satisfactory. Would it not be better to designate this type as "primary pulmonary tuberculosis"? Furthermore, the implication of the term "adult type of tuberculosis" is contradicted by the observation that this form of the disease develops in children with appreciable frequency. The term "reinfection type of tuberculosis" is preferable.

The conception of tuberculosis held by the author justifies the advocacy of special protection from reinfection for all children (and adults also) who are allergic to tuberculin, regardless of whether symptoms and primary lesions demonstrable by *x-ray* are present or absent. A positive tuberculin reaction "does not necessarily indicate disease." Ghon's careful postmortem studies revealed primary tuberculosis lesions in from 90 to 95 per cent of infected children. The usual examination method by roentgenography is not sufficiently sensitive to discover the primary lesion in all cases, but if the tuberculin reaction is positive such a lesion must be, or have been, there. The roentgen study should not, therefore, be accorded too much authority in determining that the individual has or has not primary tuberculosis for that question is settled by the tuberculin reaction. The roentgen examination of positive reactors, he believes, should be made only for the special purpose of determining whether reinfection types of tuberculosis are present or absent.

How should cases of primary tuberculosis be treated? Manifest disease, of course, may require sanatorium care or its equivalent, but for first infection types generally, observation and good hygienic care are all that is needed. The summer camp provides a pleasant outing for infected children, but nothing of added basic curative value. Admission to

a preventorium unfortunately separates a child from home environment, and probably furnishes nothing that could not be obtainable outside a preventorium. Experience at Lymanhurst, which is a day school planned for tuberculous children, discharges its obligation fully without the aid of a sanatorium. Certified homes seem superior to resorting to institutional care. What is needed, in short, is good medical observation, intelligent home care, and school cooperation.

Does a Primary Tuberculous Infection Afford Adequate Protection Against Consumption?—*Chester A. Stewart, Jour. A.M.A., April 8, '33.*

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KANSAS MEDICAL SOCIETY

Proceedings of the 75th Annual Meeting (Continued)

COUNCILORS' REPORTS

First District: At the annual meeting of this society a year ago I was elected to fill the unexpired term of the late Dr. L. W. Shannon of Hiawatha.

Entering upon the duties of my new office I was as full of ideals as a recent graduate and as ambitious as a bridegroom. I was going to rejuvenate the M.D.'s. of northeast Kansas and get all the county societies to functioning. We have a dandy bunch in our end of the state—but I ran clear out of energy trying to rejuvenate them and recommend they be sent to Milford.

You probably all know that the First District is composed of Doniphan, Brown, Nemaha, Marshall, Atchison, Jefferson, Pottawatomie, and Riley counties. Each has a county medical society except Jefferson and Pottawatomie. Jefferson hooks up with Douglas in the Second District, and Pottawatomie goes over to Manhattan. Doniphan and Jackson do not hold meetings. Nemaha has a closed staff proposition with her society, I am told.

On July 29th, 1932, we held a picnic at Mission Lake, Horton, Kansas, and with the members of the First District as "dutch" guests of the Brown County Medical Society. About sixty doctors, and their families, including Dr. Colt, our president, enjoyed themselves at that

meeting. Some of the Democratic members were put out a little because President Colt stated very emphatically that Alf Landon would be our next governor.

I had planned another district meeting in the Fall but could not get any encouragement from Holton, where I wished to hold it.

During the winter I visited the Marshall County Society at Marysville. Peace and harmony prevail throughout the district.

R. T. NICHOLS, M.D.

Dr. Nichols extended an invitation to every member of the Kansas Medical Society, and their families to be guests of the Brown County Medical Society at their annual meeting on the last Friday in July at Mission Lake, Horton, Kansas. Come, bring your basket lunch and have a good time.

Third District: The Third District has been rather quiet the past year. All county societies are functioning at the usual gait.

The S. E. Kansas Medical Society which embraces the 3rd district has held four meetings the past year; Fredonia in May, Independence in September, Parsons in December, and Columbus in March. These meetings are well attended, physicians from each county in the district being in attendance.

At each meeting a period is devoted to the general welfare; opinions freely expressed regarding legislation and other matters affecting state and local societies.

A little trouble came up in one of the counties between two of our members: the president appointed one of the finest physicians and squarest shooter in Kansas, as chairman of a committee to investigate and report; due to the consummate tact and diplomacy used by this chairman, the whole affair was adjusted to the satisfaction of all concerned. Some day, with the consent of the parties concerned, I want to have this report published in our state Journal.

The third district reports all present or accounted for.

E. C. DUNCAN, M.D.

Fourth District: The Fourth District embraces the following counties: Shawnee, Wabaunsee, Geary, Osage, Morris, Lyon and Chase.

With the exception of Geary, these counties are served by two societies, viz., Lyon County society and Shawnee County society.

The Lyon County Society had, at the first of the year, 38 paid-up members, derived as follows: Lyon, 23; Chase, 5; Greenwood, 4; Morris, 2; Coffey, 1; Osage, 2; Reno, 1. One new member was gained by transfer, and seven lost—two by transfer and five by suspension. Eleven regular meetings and one special were held, with an average attendance of 19. There was one guest speaker during the year, and there has been good interest manifested by the members. The present officers are: P. W. Morgan, Emporia, president; C. E. Partridge, Emporia, vice president; D. R. Davis, Emporia, secretary-treasurer. The society issues an attractive folder containing the monthly programs for the year, list of hospitals, list of members, and other information of interest. This society is a model for any of our county societies to emulate.

The Shawnee County Society at the beginning of this year, had 139 paid-up members, derived as follows: Shawnee, 116; Jefferson, 7; Osage, 7; Wabaunsee, 5; Pottawatomie, 3; Jackson, 1. Six members were gained during the year: 3 by transfer and 3 by application. Five were lost: 1 by transfer, 2 by death and 2 by suspension.

Ten regular meetings were held and three special meetings. Eight guest speakers contributed to the programs. There was an average attendance of 58.

The present officers are Marvin Hall, president; G. A. Finney, vice president; E. G. Brown, secretary, and M. B. Miller, treasurer.

This society is probably the largest in the state and is fully alive, and alert to any situation which may confront it.

The Geary County Society was organized last summer and I am informed now has nine members. Its officers are L. R. King, president, and L. S. Steadman,

(Continued on Page 275)

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

ASSOCIATE EDITORS—R. T. NICHOLS, L. F. BARNEY, E. C. DUNCAN, O. P. DAVIS, J. T. AXTELL, H. N. TIHEN, C. C. STILLMAN, ALFRED O'DONNELL, H. O. HARDESTY, I. B. PARKER, C. H. EWING, W. F. FEE.

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The Journal of the Kansas Medical Society is not responsible for statements, methods or conclusions presented in any article other than by the editorial staff.

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EDITORIAL

THE CANCER PROBLEM IN KANSAS

The cancer problem is daily becoming of greater interest and significance to the medical profession and the public. While the number of patients suffering from the disease is not large when compared to some other disease groups the mortality rate from cancer is among the highest known to medical science. Left alone, the cancer sufferer always dies from the disease.

It is being increasingly recognized that cancer is curable and in order to bring about a greater number of cures in this field the profession must become more alert to the significance of early signs and symptoms met with in their patients. The watchful waiting too often indulged in with suspicious lesions must be abandoned for a policy of determining the character of the lesion at the earliest

possible moment. Every cancer case is an emergency case, not for unknowing surgery but for prompt investigation as to the best therapeutic procedures to pursue.

In turn, the public must be led to know the significance of early signs of cancer. No group is as well qualified to inform the public as is the medical profession. The profession must realize, however, that the public is receiving health information—and misinformation—from many sources and is not always qualified to judge of the accuracy of the statements made.

The outlook for a practical program of cancer control rests upon an educational foundation. Present misconceptions in the public mind and a certain amount of pessimism in the professional mind must be replaced with constructive facts and a knowledge that cancer is being cured in an encouraging number of cases.

The profession should realize that cancer is not a one man disease; its diagnosis and treatment require the services of the pathologist, radiologist and internist in addition to the surgeon who may be in charge of the case. Each of these specialists has a contribution to make to the diagnosis and treatment of the case. Special facilities are also necessary to care for cancer patients in keeping with our present knowledge of diagnosis and therapy of this disease. The interest and cooperation of hospitals, therefore, is essential to the rendering of an adequate service to cancer patients, and so a program of coordinated and cooperative effort is required for the development of a practical and effective program of cancer control in any community.

The Kansas Medical Society has accepted the responsibility for the cancer work in this state, and has shown its interest in practical and constructive ways.

A permanent committee of the society has been formed to consider the various aspects of the problem. A symposium on cancer was presented at the last annual meeting. The papers of this symposium appear in this issue of the JOURNAL and should be read by all members.

Perhaps the most significant evidence of the interest of this society was the invitation extended to the American Society for the Control of Cancer to make a survey of the cancer problem in Kansas, reporting its findings with recommendations to the society. This survey will be a fact finding undertaking and will bring together for the first time reliable data on facilities in the state for diagnosis and treatment of cancer, their distribution and how used; on the number of cancer patients hospitalized, and the distribution of cases and deaths throughout the state. The report of this survey, when submitted, should point the way to an improved service to sufferers from this disease and coming, as it will, from an impartial and unbiased source should commend itself to the thoughtful consideration of this society. Similar surveys made in neighboring states, Colorado, Iowa, Minnesota and Wisconsin, have been accepted by the medical profession in those states and the recommended program put into effect as far as local conditions permitted.

With the interest of the Kansas Medical Society so plainly shown, and with the impetus to be given by the survey it is to be expected that the welfare of the cancer patient in this state will be more adequately provided for and a lasting contribution made to the problem of cancer control.

CHECKING UP ON THE OTHER DOCTOR*

It occasionally happens in the experience of most of us that a dissatisfied patient asks our opinion of the results of treatment by some other physician, or he may seek some other physician's opinion of our methods and results. If there ever was a situation in which silence is golden, it is this. There is nothing to be gained by anyone in venturing a judgment of any other physician's results, unless that opinion is honestly favorable. It is never possible to ascertain all the factors with which the attending physician or surgeon had to contend. A patient is wholly unlike a mechanism, all the factors entering into the construction or repair of which are capable of measurement. Hence the difficulties of a just evaluation of a physician's treatment. Besides, such an attitude often leads to a charge of malpractice. If the most approved scientific service always produced desirable results, and the opposite produced bad results, but how often have good results followed indifferent and poor results the most approved treatment. Costly and annoying suits might be prevented if greater care were exercised to avoid being intrigued into an opinion of another's work. In our estimate of another doctor's work the lines on the tomb of Sir Walter Raleigh in Westminster Abbey are most appropriate, even while we are in the flesh: "Should you reflect on his errors, remember his many virtues, and that he was mortal."

WHY ADVERTISING PAYS

The JOURNAL of the Kansas Medical Society is read by physicians in active practice. They are the doctors who buy products and prescribe them for their patients.

*Jour. Mich. State Medical Society, June, 1933.

The JOURNAL is jointly owned by its readers. They have a personal interest in patronizing their own advertisers.

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It confines its circulation to a limited field. Its editorials and news pertain to this particular territory.

All advertising is carefully edited. Questionable advertising is excluded. Readers know the advertising pages are trustworthy. Ethical advertisers are solicited.

EDITORIAL COMMENT

A. R. Mitchell, Lincoln, Nebraska, member of the Board of Trustees, American Medical Association, died May 26.

It is reported that the total number of diabetes patients in the world now using insulin is in excess of one million.

One of the exhibits at the Century of Progress Exposition, Chicago, is the world's largest microscope. The instrument is seven feet in height.

The economic loss from motor vehicle accidents is estimated to be in excess of two billion dollars per year. This is nearly four times the fire loss and approximates the cost of public instruction.

Three groups of pollen producers are responsible for the great majority of hay fever cases: trees, grasses and weeds, especially the ragweed. The average untreated hay fever patient suffers from 42 to 70 days annually.

Walter L. Bierring, of Des Moines, Iowa, was named as President-elect of the American Medical Association at the Milwaukee meeting. He is a graduate of the State University of Iowa and received his degree in both arts and medicine in 1892.

The American Congress of Radiology will meet in Chicago, September 25-30, at the Palmer House. Henry K. Hancock, president, of Philadelphia, has announced all physicians, physicists, biologists, and others connected with the allied sciences will be made welcome at the Congress.

An act of the 1929 Legislature requires the use of a prophylactic solution in the eyes of each new born baby. The state board of health will supply on request by physicians and without charge, wax ampules of silver nitrate. The ampules are packed twelve in a box, and each ampule contains approximately eight drops of the solution.

Although medical literature in recent years has included numerous reports on the value of Amidopyrine in the treatment of measles, Borovsky and Steigman do not consider it as a specific. "It is a valuable antipyretic adjuvant in the treatment of the disease but should not be considered a specific." (*Jour. A.M.A.*, June 10, 1933.)

Carcinoma of esophagus: In a study of 61 cases out of 41,000 admissions to the Peter Bent Brigham Hospital, Gaetan and Emery found that early diagnosis of this condition was often impossible because of the insidiousness of the onset of the symptoms, and the frequent failure of both *x*-ray and esophagoscopy to show the lesion even in those cases where used. (*New Eng. Jour. of Medicine*, 207: 1014.)

Graham, Murphree and Gill show that a single injection of from five to ten units of precipitated toxoid has rendered 171, or 92.4 per cent of 185 strongly Schick positive children Schick negative. Of 613 children, 592, or 96.6 per cent, were Schick negative when tested from two to four months after a single injection.

tion. The original immunity status was unknown, but 72 per cent were preschool children. (*Jour. A.M.A.*, April 9, 1933.)

Blanks for annual registration of physicians have been mailed by C. H. Ewing, Secretary of the Board of Medical Registration and Examination to the last known address of all physicians licensed by that board. If you have not received your blank, notification should be made to Dr. Ewing at Larned. In case the certificate has been misplaced, the certificate number has been placed on the upper left hand corner of the envelope. The registration fee is one dollar, and if registration is not made by October 1, the physician is no longer legally entitled to practice in the state.

Sir Henry Dale, M.D., London, director of the National Institute for Medical Research of England and one of the world's leading authorities on pharmacology, was the principal speaker at the dedication of the Merck Research Laboratory, Rahway, New Jersey, April 25. Dr. Dale was knighted in 1932, made commander of the British Empire in 1919, a Fellow of the Royal Society in 1914 and is a Fellow of the Royal College of Physicians. The Merck Research Laboratory, recently completed at a cost of \$200,000, is considered one of the most modern of its kind in the world.

The Bureau of Investigation of the American Medical Association has recently prepared and has ready for distribution a 33-page pamphlet on "Cancer Cures and Treatments." The pamphlet deals with 39 "cures" or "treatments" exploited from 15 different states. Some of these, while widely advertised in their time, are out of existence; others are still

being exploited. The "treatments" themselves, as is brought out in the foreword to the pamphlet, range all the way from palpable frauds, through those whose methods seem to smack more of commercialism than of science, to others that may be said to represent the optimistic claims of misguided enthusiasts. As the foreword also emphasizes, it is to be borne in mind that a person with cancer will die just as surely by relying on an honest but misguided enthusiast as by submitting to the malpractice of the most blatant of cancer-cure swindlers. The pamphlet may be secured from the American Medical Association at a cost of fifteen cents each.

Need for more complete and informative labeling on patent and proprietary medicines and for stricter regulation of patent-medicine advertising is seen by Dr. F. J. Cullen, chief, drug control, Federal Food and Drug Administration, in reports of recent fatalities resulting from cinocophen poisoning. Cincophen, a chemical anodyne and sedative, is frequently used by sufferers from neuralgia, rheumatic pains, neuritis, arthritis, gout, and similar disorders. The Federal food and drug law, as at present written, does not require the presence of this drug in a medicine to be declared upon the label. "Mayo Clinic, Rochester, Minn., recently reported five fatal cases due to poisoning from cincophen which was self-administered or taken without proper medical supervision," says Dr. Cullen. "The patients came to the clinic for relief from jaundice. Atrophy of the liver was the main pathology. As late as October, 1932, the *Annals of Internal Medicine* reported six fatal cases of cincophen poisoning, four of which were caused by one proprietary remedy."

THE LABORATORY

Edited by

J. L. LATTIMORE, M.D., Topeka

The part played by the laboratory in the cancer problem is one of the most important. Its main value is the making of an early diagnosis. With our present knowledge concerning cancer, of unknown etiology and specific treatment, what cures that are obtained for the most part are due to the early diagnosis. This diagnosis is made only upon biopsied tissue and not by any clinical laboratory procedure.

There have been a great number of tests recommended, both chemical and serological for the diagnosis of cancer, but their percentage of errors are so great that none can be recommended for clinical use. The fallacy of some of the tests that are so highly recommended is that the cancer must be in an advanced stage before the test will show a positive finding, at which time, in almost all cases the diagnosis can be made from physical examination. The same fallacy applies to the *x-ray* diagnosis.

Until such a time, when research workers have definitely established a known cause for cancer and the required therapy, we must depend for our cures upon the early diagnosis and radical treatment. This radical treatment may be surgical, radium or *x-ray* or combinations of two or three of these agents.

Education of the public appears to be the most important factor at the present time. There can be no argument against the wisdom of warning the general public against cancer, the early signs and symptoms and the necessity of reporting to the family physician at once. The physicians must then be on a keen outlook for early signs with the idea of making the diagnosis, before tissue destruction and metastasis.

If the lesion is located where a biopsy if possible, a portion of the mass should be excised and submitted to a pathologist. If located in an area where a biopsy is not advisable, a radical excision

should be made, the specimen examined and if found to be malignant, the prognosis must be guarded.

Many specimens examined show early cellular changes, which would suggest a malignant process; yet the changes of the cells are not typical and these cases, by most pathologists are grouped as the precancerous lesion. It is these, if radical operative procedure has been done, that offers the best prognosis. Study of individual cell changes as well as cellular relation, is the basis for diagnosis of a cancer under the microscope. There are, however, some types of malignancies that require history, physical appearance, *x-ray* and microscopical findings to arrive at a proper diagnosis. There must be a very close cooperation between the physician and the pathologist in these cases, if a correct diagnosis is to be made.

There is little or no trouble encountered in making the diagnosis of a late malignancy when the cells, both in individual appearance and relations, are typical.

Surgeons now have adopted the routine examination of all tissues removed and for the most part, they are making a study of the slides. Correlation of all findings, on physical examination, at the operating table and under the microscope is the ideal arrangement for the surgeon.

Tissue removed is preserved in 5 per cent formaldehyde, is at once delivered to the laboratory for diagnosis. If an urgent diagnosis is desired, a frozen section is made and an opinion rendered within a few minutes; as a routine the majority of pathologists prefer the paraffin method, which requires 48 hours to complete, with allowance of a few hours for study, a report should be made within three days.

————— R —————

Ralph Boerne Bettman and Robert S. Baldwin, Chicago (Journal A.M.A., April 22, 1933), present a case of retrograde intussusception of the jejunum into the stomach following a gastro-enterostomy performed twelve years previously. A review of the literature discloses thirty-two similar cases. The authors believe that the condition is not as rare as one would suppose from the scarcity of these reports but that it has been frequently overlooked. Early operation consisting of simple reduction of the intussusception is over 90 per cent successful.

RECENT MEDICAL LITERATURE

Edited by
WILLIAM C. MENNINGER, M.D., Topeka

SURGERY IN MALIGNANT GOITER

Tinker presents his personal results of operation and irradiation plus the views of leading men in this field. Among the patients operated on and treated by irradiation for malignant goiter, the writer found the following number of patients were living and symptom-free for the designated period of years: ten for three years, nine for four years, eight for five years, six for six years, five for seven years, two for eleven years and one for thirteen years. One patient died from an unknown cause after nine years and one died from apoplexy at 73 years of age after sixteen years. The author emphasizes three points in conclusion: Exceptionally favorable results with slow growing, late metastasizing, radiation-sensitive growths which make up a large proportion of the total malignant growths of the thyroid. If untreated these go on inevitably to a fatal outcome. The value of the combined treatment by irradiation and surgical measures, which in the hands of many surgeons in widely separated locations has given a high percentage of cures or, at least relatively comfortable life for many years. The great promise of electrosurgery which, by destruction of cancer cells, leaving nonabsorbing surfaces and sealing the vessels and lymphatics, should reduce the likelihood of local recurrence and prevent metastasis.

Results of Surgical Treatment of Malignant Goiter: Tinker, Martin B.: *Archives of Surgery*. 26:705-712, April, 1933.

THE BOWEL IN CHRONIC ARTHRITIS

Fifty-eight patients with chronic arthritis were observed by Traut over a sufficiently long period to justify an appraisal of their treatment. Rectal cultures in arthritic patients yielded streptococci more frequently and in larger numbers than did similar cultures in non-arthritis. Streptococci isolated have for the most part belonged to the eutercoccus group. Agglutination by the serum of the host and cross-agglutination of other rectal strains are present. Forty-

eight per cent of a group of patients with chronic arthritis were markedly improved or recovered with the help of non-specific treatment. Sixty-eight per cent of the patients were treated with vaccines of the streptococci from rectal and other foci were markedly improved.

The Role of the Bowels in Chronic Arthritis; Traut, E. F., *Annals of Internal Medicine*. 6:913-921, January, 1933.

TETANY IN VERY YOUNG INFANTS

Cohen presents three histories of infants in which the symptoms of tetany began at 7 weeks of age in infants predisposed to it by virtue of being twins or prematurely born. Treatment method consisted of viosterol and calcium lactate. The author draws the conclusions that tetany occurring in very young premature infants may be the primary expression of a low calcium form of rickets, and may not be suprarachitic, as in older infants. Tetany in very young immature infants with no clinical or roentgen evidence of rickets but with evidences of osteoporosis may possibly be a nonrachitic form of tetany. A congenital deficiency in calcium may develop into the type of infantile tetany comparable to that resulting from osteomalacia and celiac disease.

Cohen, Philip: Tetany in Very Young Infants, with Special Reference to Etiology; *American Journal of Diseases of Children*. 45:331-343, February, 1933.

METAPHEN IN THE TREATMENT OF ULCERS

Trippe presents six striking case reports of the series of 82 cases studied, of this number 26 of gastric and 56 of duodenal ulcers. Metaphen, in 1:500 solution, was given orally to patients with symptoms of chronic abdominal distress in the dose of 4 cc. three times a day with very gratifying results. Relief from the pain was obtained in practically all cases in an average of three days' time. No toxic effect was ever observed. The author found complete disappearance of gastric and duodenal ulcers consequent upon treatment with metaphen and it was demonstrated by x-ray studies made before and after treatment.

Oral Administration of Metaphen in the Treatment of Gastric and Duodenal Ulcers: Trippe, Clarence Morton. *Annals of Internal Medicine*, 6:90-913, January, 1933.

THE VITAMINS

The authors in according the vitamins an indispensable place in the diet, do not consider them valuable because they furnish energy, but roughly consider them along with the hormones and those inorganic elements like iodine, copper and manganese which are required only in fractions of a milligram. The most potent sources of Vitamin C in nature are lemon, orange, tomato, cabbage, spinach, lettuce and onions. Experience has shown that, as it occurs in nature, Vitamin C is extremely labile and is readily destroyed by heat. Little is known of the physiological action of vitamin C. Vitamin C was discovered through scurvy and vitamin B came chiefly through the effort of workers to find the cause of beriberi. Vitamin B corrects the loss of appetite which develops in man and animals subsisting on a diet lacking this factor. It appears that yeasts are excellent sources of this vitamin; wheat germ is also very rich. In spite of the tremendous amount of research in this general field it is admitted that the question as to the exact function of this vitamin remain unsolved. Vitamins B have one property in common, they are soluble in water. The most potent source of vitamin A is fish-liver oils. Excellent sources are alfalfa, broccoli, carrot, lettuce, spinach, tomato, watercress, butter, cheese, cream, egg (yolk) and milk (whole). Deficiency in vitamin A responds for growth failure as well as a diseased eye condition and formation of concretions in the urinary tract. Its chemical nature is pretty well understood. Vitamin D is a calcification and is concerned with rickets. It was discovered that ultra violet light could correct this and consequently it has been used directly to the person and is a responsible factor in many foods. Some foods can be activated by irradiation with ultra violet light. Cod-liver oil still remains the most important natural source of the vitamin and also is present in egg yolk and to some extent in milk and is remarkably stable.

The Present Day Status of Our Knowledge of the Vitamins: Smith, Arthur H., Cowgill, George R., Jackson, Richard W., and Anderson, William E.: The Yale Journal of Biology and Medicine, 5:235-269, January, 1933.

Proceedings of Annual Meeting

(Continued from Page 268)

secretary. Its members are all from Geary County, with the exception of one from Morris County.

The Geary County profession have been without an organization of their own for a long time, most of them affiliating themselves with the societies of adjoining counties. It is very gratifying to know that they are now organized and doing business under their own flag. I did not know of their organization until very recently and then through information furnished by Dr. Hassig. I should have been glad to visit their initial meeting as an interested spectator if only some of my good friends in Junction City, or even Dr. Hassig, had been so kind as to let me know about it. At any rate, I wish the new society the best of luck, and any service that I can render it at any time is hereby offered.

O. P. DAVIS, M.D.

Fifth District: I have visited practically all of the county medical societies in my district and am glad to report that they are in satisfactory condition. Membership in the societies and attendance at meetings has been very good. The custom has been growing of two or more societies meeting together several times a year and in this way very interesting meetings are enjoyed.

J. T. AXTELL, M.D.

Sixth District: The local county societies of the Sixth District are functioning and interested in medical affairs. There is a great deal of dissatisfaction with the present organization, the present accomplishments, and with the character of the annual meeting of our state society.

H. N. TIHEN, M.D.

Seventh District: Clay County has had regular meetings of its county medical society each month, save during the extreme hot weather, during the past year. Attendance, while not up to the usual, possibly, has been generally good. All programs have been guest programs. They report numerous visitors at their programs, frequently including a num-

ber of the medical personnel of the Fort Riley Post.

Some of the members have expressed a feeling of genuine fear that one of the usual most delightful meetings, always, of the society may be discontinued. That means the annual "Dinner Meeting" with Doctors Carr, the retiring president, and Smiley at Junction City. This because the Geary County Society has been reorganized, though Clay County is still hanging to these two excellent members, and at the same time hoping for the welfare and success of the reorganized Geary County Society.

If the same feeling of good fellowship and neighborliness could exist and find expression as does exist among the Clay, Riley, Geary, and Saline county aggregations, we feel that the medical profession throughout the state would find itself far better off, from every point.

Mitchell County, through their most efficient secretary, Dr. Martha M. Madtson, reports a fairly active society during the past year. Possibly somewhat curtailed by the fact of the enforced usual staff meetings of their most excellent hospital at Beloit. It is the opinion of your Councilor that this is most apt to be the case in any community where a good hospital, with regular staff meetings exists. Especially would this naturally be true in the small communities where practically 100 per cent attendance on the part of members would be, in fact is, necessary for the successful maintenance of a county medical society—at least for an active one. This is a problem that has occupied the attention of the American Medical Association and their ruling is that the hospital staff meeting does not take the place of a county medical society. In spite of which theory, it all too frequently does. That is, in so far as an active society is concerned. Something for you idealists and politicians to shoot at, if and when you attend the A.M.A. meetings in any official capacity. Even might write 'em.

Osborne County, through their ever active and willing secretary, Dr. S. J. Schwaup, reports no general activities other than maintaining an organization during the past year. And that is better

than some counties even more favorably situated as to general possibilities and number of resident physicians is concerned.

Republic County, through their most competent secretary, Dr. Harry E. Robins, reports nine regular and one special meeting during the past year. The society found it necessary to summons one of its members to trial. He failed to appear and upon recommendation of the Board of Censors, his name was dropped from the list of members.

Other counties in the District did not report. We feel particularly that Cloud County in this district should have an active society. Some of the most able medical men in the state practice in Cloud County. We feel farther, that here, hospital staff meetings, essential and necessary, and laudable as well, stand in the way. Now someone, influential in the A.M.A. should look to the helping of that problem's solution. Do it, we'd imagine, through the governing boards of the hospitals. They could readily solve it, and happily too, since the trustees of the A.M.A. have seen fit to make it mandatory that in no way may such staff meetings take precedence, (official or legal) over the county, or unit organization.

Another point generally talked about in the Seventh District, is dues. The State dues, in so far as concerns the doctor in the "hinterland" (Hertzler) are too high. And, since we have, or seem to have, abandoned our lay magazine, it is my notion that the House of Delegates could well endear itself to the country fellow at least, if you'd "lay the ax" to those dues—for a time at least.

There is neither rhyme nor reason in piling a surplus into treasury of any institution or organization—especially the latter, beyond current needs. Else comes along some "Brother" with a scheme of and for spending it on one uplift movement or other. We feel that the Good Book had this one point in mind when the statement is made, "Sufficient unto the day is the evil thereof."

C. C. STILLMAN, M.D.

Eighth District: I beg to submit the following report from the Eighth District comprised of the counties: Saline, Ellsworth, Ottawa, Dickinson, Lincoln.

Saline County Medical Society is active, meets monthly; last year received new members from Ottawa County Medical Society. Total number in society—27.

Ellsworth County has eight members, is a part of the Central Kansas Medical Society, is active and meets quarterly.

Dickinson County Medical Society is active, meets quarterly, has added four new members to the society since the last report. Total membership 24.

Lincoln County Medical Society meets with the Saline Valley Medical Society, quarterly, 6 members.

ALFRED O'DONNELL, M.D.

Ninth District: Report medical activities in Ninth Councilor District.

We have one active medical society in Ninth District. It is the Decatur-Norton County Society. It has a membership of 23 this year. We lost eleven members last year. None by death.

I am sorry to report that the Smith County Society is inactive. A letter from their secretary, V. E. Watts, M.D., states that they have no paid-up members for this year. He is of the opinion that members of that society think the dues are too high.

Hope that conditions will improve so that a more favorable report may be had for next year.

H. O. HARDESTY, M.D.

Tenth District: This district is comprised of eight counties and has one active medical society, the Central Kansas. The members of this society are not confined to the resident doctors of the eight counties.

The meetings of this society are held quarterly and are alternated between Hays and Ellsworth, with an occasional meeting at Russell.

The Ellsworth Hospital and St. Anthony's Hospital usually provide the place of meeting and furnish the clinical material. The local doctors of Hays, Russell and Ellsworth provide the entertainment for the visiting doctors and their wives. A spirit of good fellowship

permeates the meetings.

The programs are aimed to be practical and helpful, made up of one or two guest speakers and one or two papers from members of the society. Free discussion of all papers is urged. Younger members of the society take an active interest in the meetings and discussions and present most of the papers by the local members.

No complaints have been registered this year with me nor have any been brought to my attention, of unethical conduct of the members. No doubt every district has a few non-members. Some of these members may give just cause for complaint. A spirit of ignoring tolerance has been manifested by the members toward any offender.

There have been few changes of locations. Considering present conditions I think we should congratulate ourselves that we have been able to carry on as we have. The depression has probably hit our profession worse than any other business. Collections are difficult to make, yet the spirit to serve has never faltered among us.

To the officials of the Central Kansas, to the hospitals, to the local physicians and those who have so royally entertained us, and to the doctors of Russell and to our guest speakers, I wish to extend the thanks of the Tenth Councilor District. It is they who have made the year a success.

IVAN B. PARKER, M.D.

Eleventh District: The Eleventh District is composed of ten counties extending from Barton County on the east to the Colorado state line. On account of the sparse population in the western part of the district only three medical organizations are maintained in the district. These are the Barton, Pawnee and Rush-Ness societies.

The Rush-Ness society is a good active organization holding monthly meetings alternately between Rush and Ness counties. They hold regular meetings with usually some outside attractions.

Pawnee County has been dormant for years but held a wonderful meeting at Larned on March 3rd. Doctors from sur-

rounding counties were invited to meet with the society at the Larned State Hospital in the afternoon where Dr. Richard L. Sutton of Kansas City, Missouri, held a clinic with about fifty patients on "The More Common Skin Diseases." The clinic was greatly enjoyed by about 50 doctors.

In the evening Dr. Sutton put on his pictures and lectured to 1500 people in the Larned City Auditorium on "Snap Shots of the Arctic." This was a public meeting and was enjoyed by both laity and doctors.

On April 21st, Barton County Medical Society met at St. Rose Hospital, Great Bend, where an excellent banquet was served by the Sisters to about 75 doctors from Barton and surrounding counties who had been invited to participate. After the banquet was served a program was put on under the supervision of the Sedgwick County Medical Society. Mr. Mac Cahal, Secretary of Sedgwick County Medical Society gave an interesting report on medical legislation at Topeka during the last session of the legislature. Mr. Cahal as Executive Secretary of Sedgwick County Society spent considerable time as a lobbyist during the session.

Dr. F. J. McEwen gave a very interesting talk on "Irregularities of the Heart" showing different conditions with slides.

Barton County always puts on a good meeting and is the outstanding society in the district for activity.

While this district has made no gains in membership during the past year we feel that under the financial conditions we have done well to keep about even.

C. H. EWING, M.D.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND EDUCATION

This committee for obvious reasons has had no formal meetings. The members of the committee being widely scattered over the state have had no opportunity for conference except at the annual meeting, therefore this report is the best that can be done under the circumstances.

In our locality there have been but two worthy health activities. For a number of years Kingman County has main-

tained through the Red Cross a public health nurse giving county-wide service and especially in the Kingman schools which contribute largely toward her salary and expenses. Her activities have been supported very generously by the medical profession.

Several years ago by the aid of the state board of health we inaugurated county-wide inoculation against diphtheria which was done by the county health officer, Red Cross nurse and student nurses of the Kingman Hospital at central points throughout the county. The local profession cooperated by giving their private patients the inoculation at a minimum charge. Results from this effort were very satisfactory. There have been no cases originating in this county for five or six years until this year when one adult case was reported which, however, was followed by a quinsy. Last fall the county commissioners refused to continue this procedure and the school board of Kingman City authorized the county physician to inoculate the school age and pre-school age children of the city at the cost of the local district and in the neighborhood of 100 were inoculated. The county commissioners have been urged to take this subject up again this fall and keep our county free from diphtheria and I believe with fair probability that such action will be authorized.

There has been in our city an incomplete type of milk ordinance and recently an agitation developed for its revision. The city commissioners were advised by the local profession and in all probability an ordinance will be passed soon to the following effect: Reasonable sanitary dairy conditions will be required and cows tested for tuberculosis and undulant fever at the expense of the city by the local veterinarian and the sale of raw milk contrary to these provisions will be prohibited. While this is far short of the ideal milk ordinance, such a one as this may possibly be enforceable and should answer fairly well for a small community such as ours.

Your committee also feels that the physicians of Kansas should make a stand on the examination of school chil-

dren for tuberculosis. This is a valuable study during the susceptible age and in the pre-consumptive stage of the disease; at which time we have the greatest opportunity of effecting a cure.

I am of the opinion that a committee such as this has very little actual opportunity for service in a state-wide manner, but I believe every doctor should take an interest in local affairs in promoting health activities in every way possible even though his efforts are only individual and local.

H. E. HASKINS, M.D., Chairman.

On motion by Dr. C. H. Ewing, regularly seconded and carried, the report was accepted and placed on file.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

You are all familiar with the set-up of the Kansas Medical Society and of course you know that until the Councilors' meeting, which is usually held in Kansas City each year about the middle of January, it is impossible for a committee to know just what is expected of them, as no Council meeting is held since the previous May.

However, last fall we had a Councilors' meeting in Kansas City in October without expense to the Society. The Council there approved what later was Senate Bill 181 relating to Crippled Children. This is the bill worked out by the legislative sub-committee of which Dr. John L. Evans of Wichita was chairman. Your Chairman met in Wichita in December with Dr. Evans' committee and the Governor's Advisory Committee to the Crippled Children's Commission. It was then apparent that different views were held by the committee of the Kansas Medical Society and the Crippled Children Commission. Your committee could take no further steps until the Council meeting January 17. It was decided at this Council meeting that your committee employ John Hamilton of Topeka as lobbyist and \$250.00 expense money was voted. However, Mr. Hamilton was unable to do this for us. The committee immediately got busy. We had numerous meetings in Topeka, but we were too late as far as the Crippled Children Bill was

concerned. Had we been able to have pushed the bill approved by the Council and the legislative committee at the opening of the legislature, I think we would have had no trouble in putting it over. Your committee was responsible for the passage of House Bill 431 which is an extremely important piece of legislation.

H. 728 was approved by our committee. It passed the House and as we were anxious for this bill to pass the Senate we sent messages to 65 secretaries throughout the state and as a result something more than 600 telegrams were received by Senators asking for passage for this bill. Had it not been for the last minute rush this bill would undoubtedly have become a law.

H. 319. It was necessary to defeat this bill and your chairman was instrumental at the last minute in doing so. Sedgwick County particularly wanted this defeated.

H. 740. It was extremely important that this bill be defeated. Your committee met several days before the closing of the legislature in Topeka and this bill, we were assured, would not be called from the calendar. However, two days later it was advanced to the third reading. Again your committee got busy with the telegraph and as a result more than 500 telegrams from all over the state showered in on our Representatives. This bill did not pass.

The committee decided that in the future if we can acquaint the members of our society with the importance of legislation and they will take interest enough to send 500 or 1,000 telegrams that we can accomplish something in putting over beneficial legislation and defeating bad legislation.

The executive secretary of the Sedgwick County Medical Society asked for our help on H. 319, which we were glad to give as it seems this piece of legislation affected only Sedgwick County and I have reason to believe that our efforts defeated this bill.

Our legislative program came through as successfully as we could expect. I believe that an active legislative committee such as we had this year, with tele-

grams from all over the state as we had on two or three bills, getting the doctors to understand the importance of each county actively participating when called upon, is really more important than having paid lobbyists.

Suggestions: I would suggest that in each November preceding a meeting of the legislature the Council have an official meeting at which the president-elect and committees receive instructions as to the laws they shall sponsor. The chairman of the committee wants to take this occasion to thank the president, Dr. J. D. Colt, Sr., and Dr. J. F. Hassig for their loyal support. All that was necessary to get them to Topeka was to send a telegram to meet in Topeka at 9:00 the next morning and they were always there.

Your committee takes this opportunity to extend our thanks to Senator J. B. Carter and Representatives Morgan and Blount. Had it not been for circumstances over which we had no control the famous joker in the Medical Practice Act would have been annulled.

Your committee hereby extends our appreciation for the unprecedented support given our requests such as sending more than half a thousand telegrams on two different occasions, showing an awakening of our members to the necessity for cooperation.

Our contacts in Topeka notified us when legislation we approved or disapproved would come up; Representative W. G. Fink of Fredonia arranged for us to appear before a committee which we did with the mercury 14 below zero. In the language of the top sergeant, we stood at attention during the entire session of the legislature. While only part of our program was enacted into law, we defeated many bad bills.

E. C. DUNCAN, M.D., Chairman.

A motion was regularly seconded and carried that the report be accepted and placed on file.

REPORT OF COMMITTEE ON SCHOOL OF MEDICINE

Your Committee on the School of Medicine reports as follows:

The school maintains its high rank

among medical schools being an A plus school. This is especially manifested by the thriving condition of its chapter of the Alpha Omega Alpha Fraternity, an honorary student medical fraternity. Only 40 of the 75 medical schools in the United States have chapters, the others having not been approved.

As teaching and hospital facilities have increased, the number of students accepted has been increased. This year there were approximately 450 applicants, of whom 75 freshmen were accepted. The sophomore class has 75, the junior class 68, and the senior class 54. The limit for juniors and seniors is to be 70.

The number of student nurses is limited to 85 and two different courses are given. One is a three year course given entirely at the Bell Memorial Hospital, conferring the degree of R.N., and the other is a 5 year course, 3 years at Lawrence and 2 years at Bell Memorial, conferring the two degrees B.S. and R.N. The number in this latter course is rapidly increasing.

The hospital is one of the few hospitals during this period of economic distress that has remained full and active to capacity, maintaining a daily average of 180 patients with a total of 250 beds, 20 of which are bassinets.

A change in the system of instruction of the seniors was made the last year, adopting the trimester system. These students are assigned in groups for 6 weeks periods, rotating on services in the out-patient departments and the various services and wards of Bell Memorial and St. Margaret hospitals.

During the pre-senior summer vacations, groups are still sent for instruction to the insane hospitals at Topeka, Osawatimie, and Larned. Others are assigned to doctors of medicine in various parts of the state provided the doctors furnish them rooms and board. Doctors of medicine wishing to avail themselves of this student service should communicate with the dean of the medical school.

Only one post graduate course, with 65 registrants, was given during the past year. Other post graduate courses were discontinued on account of economic conditions.

Appropriations for the school were cut 25 per cent and a like reduction of salaries was made. This will handicap but not cripple the school.

Demands for loans to highly deserving students have greatly increased this year. These funds are derived from three sources, viz: The University Student Loan Fund, the K. U. Medical Alumni Loan Fund and a small Medical School Loan Fund. Without these 15 or 20 excellent deserving medical students would have been unable to have continued their courses. Besides this the school has furnished employment to 8 students, 2 working as technicians, 5 as janitors, and 1 as librarian, and to the wives of 5 students in order that they might carry on.

This year medical schools and other agencies operating free dispensaries and hospitals in the United States, have faced an accentuation of the problem of the abuse of the free facilities of the dispensaries and hospitals. During the year the administrative committee of the University of Kansas School of Medicine invited the local county medical society to send a committee to assist in formulating changes in the rules governing the admission of patients to the free services of the dispensary and hospital.

Every effort is being made to exclude all patients who are able to pay even a small professional fee and at the same time render medical services to the deserving, indigent sick both in the dispensary and in the wards of the hospital. Free schedules for dispensary and hospital services have been adjusted to make it possible to render this service under the reduced budget appropriated and at the same time avoid unfair competition to the medical profession and other hospitals.

The following includes some of the changes in the policy of the dispensary that have been made this year:

(1) No dispensary patient is turned away because he does not have the money to pay the usual small dispensary fees. These constitute about 25 per cent of all dispensary patients.

(2) No patient is admitted to the dispensary without a letter either from a doctor of medicine, a recognized social

agency or a minister attesting the eligibility of the patient for such services. Where the doctor gives such letter he will be mailed the diagnosis and findings of the patient provided he makes such a request in the letter given.

(3) No member of the staff is to receive any fee from dispensary patients.

The committee feels that the cooperation of the medical school authorities with the profession in this effort and the continuation of the effort now going on is highly commendable and desires to express the Kansas Medical Society's appreciation of the spirit of mutual collaboration.

Respectfully submitted,

L. F. BARNEY, M.D.

L. G. ALLEN, M.D.

W. M. MILLS, M.D.

E. S. EDGERTON, M.D.

W. STEPHENSON, M.D.

A motion by Dr. Gray, regularly seconded and carried, that the report be accepted and placed on file.

REPORT OF COMMITTEE ON HOSPITAL SURVEY

In submitting the Committee's report on hospitals for the state of Kansas, we first wish to give credit to the American Medical Association through its Council of Medical Education and Hospitals for information on the hospitals of Kansas.

We are herewith submitting statistical information and an analysis of said reports:

Hospitals of Kansas—Number and Capacity of Hospitals According to Type of Service Together with Number of Patients Admitted:

The statistical tables which accompany this text are derived largely from Hospital Service in the United States as prepared by the Council on Medical Education and Hospitals of the American Medical Association.

There are now 130 hospitals in the state of Kansas, a reduction of two under the previous year. Nevertheless, the bed capacity has increased by 400 and bassinets by 50. About 5,000 fewer patients were cared for in 1932. Almost all of the loss of patronage falls upon the nongovernmental group of institutions.

According to our figures the average daily census of hospitals increased from

Type of Hospital	No. of Hospitals	Beds.....	Bassinets.....	Patients Admitted.....	Av. Census of Patients.	No. of Births.....
General	100	5,531	733	75,878	2,943	7,977
Nervous and Mental	11	6,313	.....	1,499	5,966	.....
Tuberculosis	3	351	.....	398	324	.....
Maternity	1	77	19	215	68	111
Industrial	3	253	.....	809	144	.....
Convalescent and Rest .....	.....	.....	.....	.....	.....	.....
Isolation .....	.....	.....	.....	.....	.....	.....
Children's .....	.....	.....	.....	.....	.....	.....
Eye, Ear, Nose and Throat .....	.....	.....	.....	.....	.....	.....
Orthopedic .....	.....	.....	.....	.....	.....	.....
Hospital Departm'ts of Institutions..	12	564	1	5,894	326	.....
All other Hospitals .....	.....	.....	.....	.....	.....	.....
Totals	130	13,089	773	84,743	9,771	8,088

9,495 in 1931 to 9,771 in 1932. The reason, no doubt, for this increased length of hospital stay by patients is largely accounted for by patients in psychiatric and tuberculosis hospitals.

Governmental Institutions—The governmental hospitals in Kansas are practically entirely non-competitive with privately owned institutions. The federal group comprises army hospitals, custodial institutions and a soldiers' home. The state institutions are psychiatric and for tuberculosis. They account for almost all of the increase in beds in the governmental group and for 800 of the added admissions.

Non-Governmental Hospitals—Churches operate 37 hospitals, two less than last year. The bed capacity, however, has remained about stationary. The number of admissions has fallen off sharply, for a decrease of almost 4,000 patients has occurred. The average census of patients is down by 70. The other types of institutions in this group, maternal, industrial, and individual and independent, do not represent any particularly marked changes. Nearly all of them show losses in admissions and in average census.

Hospitals According to Type of Service—The figures in these classifications do not represent any great change. Two hospital departments of institutions have dropped out of the picture. It will be apparent, however, from these tables at whose expense the drop in hospital

patronage has occurred. General hospitals with an increase in 131 beds lost about 6,000 patients. Nervous and mental institutions with an increase of about 300 beds admitted 100 additional patients. That many of these admissions become permanent residents of the state hospitals is illustrated under the statement *Average Census* which showed that 5,966 patients are cared for regularly in the state of Kansas. In other respects the figures do not illustrate any outstanding tendency.

There were 70 fewer births in Kansas Hospitals in 1932.

Physicians Connected With Hospitals—In Kansas the figures for the year indicate that there are 1,477 doctors connected with hospitals, of these 1,405 were staff members, 36 were superintendents of hospitals, 35 were interns and 1 was a resident physician. Most of these physicians are graduates of Class A medical schools.

Schools of Nursing—In the 130 hospitals in Kansas, there were 46 training schools; 42 of these state accredited. These schools enrolled 1,237 student nurses. Five hundred thirty-seven registered nurses were employed for nursing duties only, while 102 additional registered nurses were otherwise employed in these hospitals as administrators, instructresses, anesthetists, etc.

Hospitals Refused Registration—The Council has registered 101 hospitals and sanatoriums and 29 related institutions. It has refused registration to 23 hospitals containing 520 beds. Non-registration is the result of non-conformity to the Essentials of a Registered Hospital.

Hospitals Approved for Internships—Five hospitals in Kansas have been approved for training of interns. Three of these institutions are located in Kansas City and two in Wichita, the most populous places in the state and supplying more adequate types of clinical material for purposes of instruction. These hospitals provide positions for 24 interns.

Two psychiatric hospitals have been approved for the training of residents in psychiatry, one of a state hospital and the other a private sanitarium.

Respectfully submitted,

GEO. M. GRAY, M.D.

DAVID W. BASHAM, M.D.

ALFRED O'DONNELL, M.D.

A motion was regularly made, seconded and carried that the report be received and placed on file.

Dr. Tihen made a motion which was regularly seconded and carried that the remaining reports of the standing committees be accepted without being read as they would be incorporated in the minutes.

REPORT OF COMMITTEE ON MEDICAL HISTORY

In rendering a report at this time the committee would call attention to the fact that the album which contains photographs and short biographies of past presidents of the Kansas Medical Society has been kept up to date. The latest photograph and biography secured is that of our President for 1933, J. D. Colt, Sr., M.D., of Manhattan.

We have been unsuccessful in our efforts to secure photographs of John Parsons, M.D., who was elected president in 1868 and H. K. Kennedy, M.D., who was elected president in 1875.

Respectfully submitted,

EARLE G. BROWN, M.D., Chairman

W. S. LINDSAY, M.D.

O. D. WALKER, M.D.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

We submit the 1933 program as evidence of the work accomplished by the committee.

Respectfully submitted,

J. F. HASSIG, M.D.

H. L. CHAMBERS, M.D.

L. S. POWELL, M.D.

REPORT OF COMMITTEE ON STORMONT MEDICAL LIBRARY

During the past year the Library Committee has followed the very conservative rule of buying practically no new books but we have continued the subscriptions to the Journals which are as follows:

American Journal of Diseases of Children.

American Journal of Medical Sciences.

American Journal of Public Health.

Annals of Surgery.

Archives of Internal Medicine.

Archives of Pathology.

Archives of Pediatrics.

Archives of Surgery.

Journal of the American Medical Association.

Journal of the Kansas Medical Society.

Journal of the Missouri Medical Association.

Lancet (London).

Medical Journal and Record.

Quarterly Cumulative Index.

Surgery, Gynecology and Obstetrics.

This conservative policy has been established because of lack of funds. The report last year indicates only \$23.00 in the treasury. At the present time this is increased to \$105.20 with another installment of interest due about July 1st. The actual expense for magazine subscriptions amounts to nearly half of our yearly income.

The library has been used a little more by Topeka men. There have been very, very few requests from any outside of Topeka and it is recommended that the members of the society over the state have their attention called to the fact that these magazines are available to them for the matter of paying the postage.

Respectfully submitted,

WM. C. MENNINGER, M.D., Chairman

JOHN L. LATTIMORE, M.D.

W. F. BOWEN, M.D.

REPORT OF COMMITTEE ON CONTROL OF CANCER

Your Cancer Committee, realizing as it does the size and extent of the cancer problem, recognizing the apparent increase in the importance of cancer as one of the principal causes of death, it having advanced in twenty years from sixth to second place; this Society having been one of the first to appoint a committee on cancer and one of the first to engage in the enterprise of professional and lay education, having begun its work in 1916, wishes to make the following recommendation.

The American Society for the Control of Cancer having offered to make certain facilities available in this campaign of education.

Recognizing these facts, your committee wishes to offer the following resolution:

WHEREAS, The rapid increase of cancer in its various forms is assuming alarming proportions, now being second only to heart disease as a cause of death; and

WHEREAS, The present cancer situation is a challenge to the medical profession to render an increasingly effective service in its diagnosis and treatment; and

WHEREAS, The greatest hope for reducing the increasing mortality from this disease lies in diagnosis and treatment in early stages; and

WHEREAS, The medical profession and the hospitals are the only forces capable of coping with the cancer problem at this time; and

WHEREAS, There is need for further education of the medical profession and the public as to the need for and value of early diagnosis and early adequate treatment; and

WHEREAS, A constructive program of improved cancer service can be based only on accurate information as to the present professional institutional facilities for the diagnosis and treatment of this disease; therefore, be it

RESOLVED, That the Kansas Medical Society approve and sponsor a survey of the cancer situation in Kansas, and that the American Society for the Control of Cancer be requested to make such a survey, reporting its findings with recommendations to this Society.

C. C. NESSELRODE, Chairman.

A motion was made to adopt the resolution without cost to the Kansas Medical Society and under its direction, regularly seconded and carried.

Dr. Bernstorff presented the following Amendments to the Constitution: Be it enacted by the House of Delegates of the Kansas Medical Society:

That Article X of the Constitution shall be amended by adding at the end of Section 1, the following, "No member of the Council shall serve for more than two consecutive terms of office of three years each."

That Section 3, Article VI of the Constitution shall be amended to read as

follows, "The Councilors shall be twelve in number and one shall be elected from each Councilor District by the Delegates from that district at the Annual meeting each year, and shall serve for such terms as hereinafter provided."

The amendments were accepted and placed on file for action by the House of Delegates at the 1934 meeting.

At the request of Dr. Tihen the secretary was asked to read the report of Dr. Gsell's committee on full-time secretary which was submitted at the mid-winter meeting of the Council.

Dr. Stillman made a motion which was regularly seconded that the state dues be reduced to \$5.00. The motion lost by a vote of two.

Dr. Tihen made a motion that the House of Delegates instruct the Council of the Kansas Medical Society to employ a full time lay secretary without an increase in the state society's dues. It was decided to defer this matter until the House of Delegates meeting on Thursday morning.

On motion the meeting was adjourned.

(Continued in August Number)

R

THE PHYSICIAN'S LIBRARY

THE PRACTICAL MEDICINE SERIES OF YEAR BOOKS—DERMATOLOGY and SYPHILOLOGY. Edited by Fred Wise, M.D., Professor of Dermatology and Syphilology. New York Post-Graduate Medical School and Hospital of Columbia University; President (1933) of the American Dermatological Association, Inc., and Marion B. Sulzberger, M.D., Associate in Dermatology and Syphilology, New York Post-Graduate Medical School and Hospital of Columbia University. Series 1932. The Year Book Publishers, Inc., Chicago. Price \$2.25.

Abstracts of literature on dermatology for 1932 are put into 449 pages by the authors. The subjects are grouped under thirteen headings and a comprehensive index is a feature of the reviews. A special chapter is given to treatment and several new types of therapy are explained. Emphasis is placed on abnormal metabolism as a foundation for many of the unexplainable dermatoses. Much space is given to a discussion of the therapy of syphilis. The reviews are short, concise, easily read and free from the usual excess verbiage of dermatology. —C.K.S.

WHEAT, EGG OR MILK-FREE DIETS, with recipes and food lists. By Ray M. Balyeat, M.A., M.D., F.A.C.P., Associate Professor of Medicine and Lecturer on Diseases due to Allergy, University of Oklahoma Medical School, Chief of the Allergy Clinic, University Hospital, consulting physician to St. Anthony's Hospital and to the State University Hospital, President of the Association for the Study of Allergy 1930-31; director, Balyeat Hay Fever and Asthma Clinic, assisted by Elmer M. Rusten, M.B., M.D., chief of section, Dermatology and Ralph Bowen, B.A., M.D., chief of section, Pediatrics, of Balyeat Hay Fever and Asthma Clinic, Oklahoma City, Oklahoma. Octavo. J. B. Lippincott Company, Philadelphia and London. Cloth \$2.50.

A very timely book dealing with diet for the allergic patient with special emphasis upon diets not containing eggs, wheat and milk, the most common food producing allergic symptoms. The book is written in plain understandable language and is a valuable addition to the library for either the physician or the allergic patient. Instructions are specific for preparing the different foods for sensitive individuals. A long list of substitute foods are recommended with hundreds of recipes and complete instructions for preparing them. The book is recommended for those interested in the subject of allergy.—J.L.L.

MEDICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 16, No. 4. (Boston Number—January, 1933). Octavo of 256 pages with 33 illustrations. Per Clinic Year July, 1932, to May, 1933. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

Diagnosis and Treatment of the Several Types of Goiter—Dr. J. H. Means.

The author states that when the doctor is asked whether or not his patient has a goiter it is not sufficient to say yes, but he should be able to go ahead and tell what type it is and what treatment should be prescribed. He divides them according to their symptoms, local, hormonal and constitutional. Always look for change in thyroid function, evidence of pressure, of malignancy or inflammation. He describes the feeling of the different glands to the fingers and how this at times is more important in early diagnosis than a B.M.R. This is a very instructive clinic and of importance to the general practitioner who first sees these people with enlarged thyroids.

The Treatment of Diabetes—Dr. Harry Blatner.

This is one of the best articles I have

read on the treatment of diabetes. It is clear, simple, very understandable and easy to follow. He gives a very good home method of testing urine, shows how patients should be instructed to give themselves insulin and then takes two patients, one quite underweight—the other much overweight, figures out their diet and insulin amounts with their own estimation of percentage of sugar in urine. He gives simple tables of amounts of food by cupful and saucer full and their equivalents in grams and calories thus eliminating the necessity of the scale and of weighing every food. It would be of benefit to every practitioner to read and study this article and copy some of the tables and have them at hand.

The Treatment of Cardiac Asthma—Drs. Soma Weiss and George P. Babb.

In this clinic the authors present a case of cardiac asthma whose attack was stopped by placing blood pressure cuffs around the extremities close to the body and venous stasis produced in them by raising the pressure in cuffs to about 100 mm. of mercury. They give the rational of this treatment, showing what causes these asthmatic attacks and how this produces relief. Besides this they also give clinical therapy to use at the same time, also preventive measures to keep from having attacks.

Agranulocytic Angina—Dr. Henry Jackson, Jr.

Here three cases of Agranulocytosis are shown; one a very typical case, is followed through five attacks, using Pentnucleotide intramuscularly twice a day; amounts varying as to white count and differential count. All three patients recovered and the granulocytes increased soon after the use of the Pentnucleotide.

A Case of Psychological Maladjustment in an Adult due to Physical Deformities contracted in Childhood.

This article shows how deformities in children may cause them to become maladjusted socially in later life simply because they recognize that they are different from other people. This grows in the mind until some complex becomes apparent and they show it in their daily

life by some queer actions. This in many instances even leads to a psychosis if an explanation of the abnormal reaction can not be arrived at and the patient be able to rationalize his thoughts to normal reactions.—C.K.S.

OPERATIVE SURGERY, by Warren Stone Bickham, M.D., and Phar. M. (Tulane), M.D. (Columbia), F.A.C.S., former surgeon in charge of general surgery, Manhattan State Hospital, New York; former instructor in operative surgery, College of Physicians and Surgeons (Columbia), in the New York Post-graduate Medical School and Hospital and in the New York Polyclinic Medical School and Hospital, fellow of the New York Academy of Medicine, and Calvin Mason Smyth, Jr., B.S., M.D., F.A.C.S., assistant professor of surgery, Graduate School of Medicine, University of Pennsylvania; surgeon-in-chief Methodist Episcopal Hospital; visiting surgeon, Abington Memorial Hospital. Volume VII, including general index to complete work. Volumes I-VII. 849 pages with 765 illustrations. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, \$10.00

In this supplement the author, Dr. Calvin Mason Smith, Jr., has attempted to bring up to date the previous six volumes by Dr. Warren Stone Bickman, published eight years ago. He has added to each section those operative procedures which have become established as a part of the armamentarium of the well equipped surgeon.

The more important newer and accepted operations have been described following the general plan of the original work, bringing out the important steps of the operation with illustrations. The greatest amount of new material is to be found in the chapters dealing with operations upon the chest and colon. Much credit is due the author for this work and it is valuable in that it modernizes one of our finest editions on operative surgery. His index of 232 pages covers adequately the entire seven volumes.—M.B.M.

FUNCTIONAL DISORDERS OF THE GASTRO-INTESTINAL TRACT. By William Gerry Morgan, M.D., F.A.C.P., professor of gastroenterology, Georgetown University Medical School; consulting physician, Georgetown University Hospital, Garfield Memorial Hospital, and Gallinger Hospital, Washington, D. C. 32 illustrations. J. B. Lippincott Company, Philadelphia and London. Price \$5.00.

In this book the author gives a resume of the anatomy, nerve and blood supply of the intestinal tract; his method of obtaining a history on the patient and also of doing a physical examination. By reporting case histories he gives a very good consideration of the different conditions found in the gastrointestinal tract

with his methods of treatment, giving some very good prescriptions and what one might expect as to prognosis. All in all this is a very well written, instructive book for the general practitioner, but has very little in it for the surgeon.—C.K.S.

NEW AND NONOFFICIAL REMEDIES, 1933, containing descriptions of articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1933. Cloth. Price, Postpaid, \$1.50. Pp. 498; lvi. Chicago: American Medical Association.

The annual editions of this volume contain all that the busy physician needs to know concerning the newer preparations which he is daily importuned by the detail men of the pharmaceutical manufacturers to use. The remedies listed and described here have been examined and found acceptable by the Council on Pharmacy and Chemistry, the deliberative body charged by the American Medical Association with the performance of this service for the practitioner, who has not the time or means to make the determinations for himself. Among the new preparations admitted during the past year are: Trichlorethylene-Calco, an inhalation anesthetic proposed especially for use in trigeminal neuralgia; Nostal, an additional barbituric acid compound; Decholin and Decholin Sodium, bile salt preparations for use in functional insufficiency of the liver, the sodium salt being suitable for intravenous use when necessary; Biliposol, Bismo-Cymol, and Iodobismitol, bismuth compounds for use in obtaining the systemic effects of bismuth, especially in syphilis; Triphal, a gold salt proposed for use in the treatment of lupus erythematosus; a number of improved liver preparations for use in the treatment of pernicious anemia; two halibut liver oil preparations of high vitamin A and vitamin D content; and Pentnucleotide, the sodium salts of the pentose nucleotides derived from the ribonucleic acid of yeast, proposed for use in infectious conditions accompanied by a leukopenia or neutropenia.

The book contains general articles, descriptive of the classification under which the various drugs are listed. According to the preface, more or less thorough-going revisions have been made of the articles: Arsenic Compounds;

Dyes, Iodin Compounds; Liver and Stomach Preparations; Radium and Radium Salts and Silver Preparations.

—R—

COUNTY SOCIETY NEWS

BOURBON COUNTY MEDICAL SOCIETY

The Bourbon County Medical Society met in Fort Scott at the Library Building, June 19, 1933. The program consisted of two excellent addresses by Doctors L. P. Engel and F. C. Helwig of Kansas City, Missouri. Dr. Engel addressed the society on "The Diagnosis and Treatment of Tumors of the Breast." Dr. Helwig addressed the society on "The Pathology of Tumors of the Breast." About twenty physicians were present including several visitors from adjoining counties.

R. L. GENCH, M.D., Secretary.

JOHNSON COUNTY MEDICAL SOCIETY

Report of the monthly meetings of Johnson County Medical Society so far this year. The papers and talks have been furnished by members of the society.

The January meeting was held at Olathe. Dr. H. R. Wahl, Kansas City, gave a talk on the report of the "Committee on the Cost of Medical Care." A discussion on this subject by the members present was very interesting.

There was no February meeting owing to the inclement weather.

March meeting was held at Overland Park. Dr. P. L. Jones, Lenexa, gave a very interesting paper on "Management of Labor Cases in the Country." There was a general discussion opened by Dr. Calkins.

April meeting was held at Olathe, Dr. A. S. Reese, of Gardner, read a paper on "Infantile Paralysis, Report of a Case." This was a very interesting case report and a general discussion ensued.

The May meeting was held at Lenexa. Dr. R. R. Becker, of Spring Hill, read a paper on "Hyperthyroidism, Operative vs. Non-Operative." Dr. L. A. Calkins opened the discussion on the paper.

June meeting was held at Bell Me-

morial Hospital; the program began with a clinic. Dr. C. B. Francisco, Kansas City, talked on "Fractures of the Pelvic." He gave a very interesting and instructive discussion of the subject demonstrated with x-ray films.

There will be no meetings during July and August.

The officers for the year 1933 are as follows:

President, Dr. P. L. Jones, Lenexa; vice-president, Dr. James B. Weaver, Kansas City; secretary, Dr. D. E. Bronson, Olathe; treasurer, Dr. R. L. Moberly, Olathe.

D. E. BRONSON, M.D., Secretary.

LYON COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Lyon County Medical Society was held at the Newman Hospital Tuesday evening, June 6. President Philip W. Morgan presided.

The program consisted of a paper presented by Dr. Albert Beam, "Blood Platelets." The subject was well presented accompanied by case reports. The paper was very interesting.

D. R. DAVIS, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The June meeting of the Shawnee County Medical Society was held at the Shawnee Country Club, at Topeka, on Wednesday, June 7. During the afternoon, the members played golf, baseball or pitched horseshoes, and otherwise enjoyed themselves.

Forty-three members and guests were present for dinner which was served at 6:30. Guests present included W. A. Smiley, Junction City, and Hugh E. Kiene, Providence, R. I.

The applications of J. F. Casto and M. E. Pusitz were presented for first reading and referred to the Board of Censors.

By unanimous vote, L. M. Powell and A. L. Chudas were elected as Emeritus Members.

A motion was adopted that the city officials be informed the society was opposed to the construction of a city hospital at this time and the Public Rela-

tions Committee was instructed to draft a statement stating why such attitude was taken by the society.

MILTON B. MILLER, M.D., Acting Sec.

SOUTHEAST KANSAS MEDICAL SOCIETY

Sixty-one doctors of medicine attended the annual meeting of the Southeast Kansas Medical Society which was held in Memorial Hall, Coffeyville, May 24, 1933. Following a dinner served by the American Legion Auxiliary, the election of officers was held. Dr. N. C. Morrow, Parsons, was elected president succeeding Dr. E. C. Duncan, Fredonia; Dr. A. Boese was elected vice-president, Dr. H. E. Marchbanks was named secretary-treasurer, succeeding Dr. L. D. Johnson, Chanute.

The program consisted of a paper by Dr. P. M. Krall, Kansas City, on "Endocrines," and one by Dr. C. C. Nesselrode, also of Kansas City, on "Cancer," with especial reference to cancer of the stomach. The next meeting of the society will be held at Pittsburg in September.

Physicians present included: Doctors Brady, R. W. Urie, H. C. Markham and N. C. Morrow, Parsons; H. E. Morgan and E. C. Duncan, Fredonia; P. M. Krall and C. C. Nesselrode, Kansas City, Kan.; L. D. Johnson and L. L. Roberts, Chanute; O. E. Stevenson and Emma L. Hill, Oswego; C. N. Petty and R. F. Roller, Altamont; Herbert M. Webb, Humboldt; J. V. Athey, William W. Kaufmann, W. H. Shipman, H. C. Weber, S. M. Parks, H. G. Crawford, E. E. Beechwood and F. S. Etter, Bartlesville; Cleo Bell, H. E. Marchbanks, C. H. Ben-

age and C. H. Smith, Pittsburg; H. H. Brookhart and A. J. Revell, Columbus; Mac F. Cahal, W. P. Callahan, H. F. Hyndman and H. N. Tihen, Wichita; J. W. McGuire and O. D. Sharpe, Neodesha; H. A. West, Yates Center; R. L. Von Trebra and E. L. Von Trebra, Che-topa; F. E. Deal, Weir; A. L. Spafford, St. Paul; J. H. Boswell, W. H. Hiff and C. S. Bendure, Baxter Springs; E. R. Furgason and J. A. Pinkston, Independence; W. F. Coon, H. L. Aldrich, and J. A. Rader, Caney; and E. G. Coyle, A. Boese, C. S. Campbell, P. S. Townsend, J. M. Dickinson, C. A. Thomas, H. J. Bagby, J. D. McMillion, C. E. Grigsby, Myron L. White, I. B. Chadwick and E. O. Squire, Coffeyville.

H. E. MARCHBANKS, M.D., Sec.-Treas.

—R—

DEATH NOTICES

DAVIS, ALEXANDER GLENN, Logan, aged 63, died May 22, 1933, of acute miliary tuberculosis. He graduated from Northwestern Medical College, St. Joseph, in 1891. He was a former member of the Society.

FINLAW, JAMES PARKER, Hutchinson, aged 86, died April 25, 1933, of senility. He graduated from Eclectic Medical College of New York in 1884. He was not a member of the Society.

GOODRICH, CUTLER WILKINS, Wichita, aged 91, died April 17, 1933, of chronic valvular heart disease. He graduated from Physio Medical College, Cincinnati,

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in 1874. He was not a member of the Society.

HISSEM, HENRY Z., Ellsworth, aged 75, died May 4, 1933, of cerebral hemorrhage. He graduated from Bellevue Hospital Medical College in 1883. He was a member of the Society.

NORRIS, GRANVILLE ROY, Burlington, aged 66, died May 31, 1933, of cerebral hemorrhage. He graduated from American Medical College, St. Louis, in 1892. He was a former member of the Society.

OWEN, HENRY CLAY, Olathe, aged 88, died May 28, 1933, of cerebral hemorrhage. He graduated from Medical College of Ohio, Cincinnati, in 1878. He was not a member of the Society.

RHODES, JAMES JOSEPH, Cummings, aged 55, died May 20, 1933, of chronic myocarditis. He graduated from University Medical College of Kansas City, Missouri, in 1900. He was a member of the Society.

SAWHILL, WILLIAM F., Concordia, aged 77, died May 23, 1933, of chronic myocarditis. He graduated from Jefferson Medical College of Philadelphia in 1882. He was a member of the Society.

R

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

OFFICERS

Mrs. E. J. Nodurft, Wichita, President.

Mrs. M. O. Nyberg, Wichita, Secretary.

Mrs. L. B. Gloyne, Kansas City, Vice-president.

Mrs. W. O. Nyberg, Wichita, Secretary.

Mrs. Alfred O'Donnell, Ellsworth, Treasurer.

It gives me great pleasure to send greetings to all helpmates of our medical fraternity in the name of the Kansas Medical Auxiliary. A plan of work is outlined for the womanhood to assist our beloved doctors, which is divided into six divisions.

The first is *legislation*. Every woman has the right to vote the same as our men and we need women informed so that they may vote and talk intelligently before clubs and in contacts where the opportunity presents itself, on the subject of State Medicine. The lay people will not want this form of medicine when it is properly understood. Each can be of great value in helping make our own place in life safe and secure in this way. It is the duty of every wife and friend of medicine to see that proper legislation is secured, so that we will not be embarrassed by the cults practicing shoulder to shoulder with our ethical men. Only a short time ago this situation was defeated in our legislature through the organized efforts of one of our Kansas county societies. The Auxiliary can help right here on this particular subject.

Second, we have need of a health education committee division in every county to assist in the protection of all citizens in the proper immunization against the preventable diseases. This may be taken

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up through the summer Round-Up division of the Kansas Congress of Parents and Teachers, or as a specific job of an Auxiliary.

Third, public relations may be bettered by bringing about an understanding between the profession and the public. The physician's wife takes a part, and generally a prominent part, in public welfare work, Parent-Teacher work, and Federated Club work.

Fourth, the fraternity always has some unfortunate families residing in the county where an Auxiliary could make life a little easier and happier for them through a philanthropic division.

There is no finer way of getting ethical medicine in the homes and public places where the lay people may receive proper knowledge than through the *Hygeia* magazine which makes up the fifth division of Auxiliary work.

The last division and yet the very first to make a start in this county, state and national Auxiliary organization. Sociability takes away all boundary lines and cements the group into a friendly family. If for no other reason, an Auxiliary should live in each county. Singly, we may fall, but there is no limit to what can be accomplished through organization. I would urge the House of Delegates to request the officers of each county society where there is no County Auxiliary, to take the steps necessary to see that one is organized. If this organization is worth while to some of the counties, it should have an honored place in the vital development of every county medical society. Mrs. E. C. Duncan, of Fredonia, is the Kansas Medical Auxiliary organizer for 1933-34 and can give valuable aid in this work. The plans and ideas come from the parent organization which is the National Medical Auxiliary. A child when it is young needs the care and protection of the parent. It is the same way with Auxiliaries in the counties; they are each a spoke in the wheels of the state Auxiliary which support the national machine.

Together we stand, but divided we fall.

MRS. ELMER J. NODURFTH, President.

TRUTH ABOUT MEDICINES

Propaganda For Reform

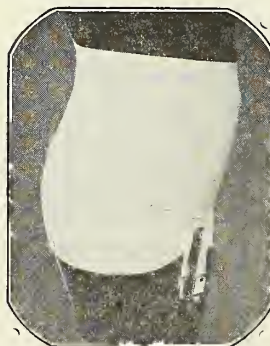
Dilaudid.—The Council on Pharmacy and Chemistry reports that in the past few months a new narcotic drug, dihydromorphinone hydrochloride, has been introduced for clinical use in this country under the proprietary name "Dilaudid." It is marketed by Bilhuber-Knoll Corp., Jersey City. The drug has been used in Europe for some years, having been patented in 1923. Briefly stated, the drug is closely allied both chemically and pharmacologically to morphine, having the analgesic property of morphine as well as its action on the respiratory system. Its action on the intestine is probably less marked than is that of morphine. It is more toxic than morphine and is clinically effective in doses which are considerably smaller than are necessary with that alkaloid. The drug was brought to the attention of American clinicians largely by a statement by Alvarez of the Mayo Clinic, published in the Proceedings of the Staff Meetings in August, 1932. In discussing the euphoric action of Dilaudid, Alvarez stated that so far as he knew no one had as yet become habituated to its use. Unfortunately, this statement was unwarranted because already at that time a number of cases of addiction to Dilaudid had been reported in the literature. Shortly after Alvarez's remarks were made, a similar statement appeared in the public press apparently based on a release from "Science Service." Realizing the importance of furnishing accurate information in this case both to the profession and to the laity, the Council

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asked Dr. Nathan B. Eddy of the Department of Pharmacology of the University of Michigan to make a report to the Council on the general status of the alkaloid. From his study of this question Dr. Eddy concluded that it has been shown experimentally and clinically that Dilaudid is powerfully analgesic and that, like morphine, it can depress the respiratory mechanism profoundly; that at the same time, the experimentally established ratio between effective doses of morphine and Dilaudid for the production of desirable effects is not materially different from the ratio between their toxic doses; and that clinical trial has not shown that Dilaudid is free from tolerance and addiction evoking properties, and that, while side actions such as nausea, vomiting and constipation seem to occur less frequently after it than after morphine, the prolonged administration of Dilaudid should be entered on with as much caution as would be exercised with morphine itself. The Council has postponed for a reasonable length of time the consideration of the eligibility of Dilaudid for inclusion in New and Nonofficial Remedies in order to give the manufacturer opportunity to submit it and to revise the advertising in conformity with the available evidence. (Jour. A.M.A., April 1, 1933, p 1031).

Quantitative Conversion of Carotene to Vitamin A.
—In 1919 Steenbock called attention to the similarity in the distribution of vitamin A and the yellow plant pigment carotene. During the following ten years little attention was paid to this remarkable correlation between vitamin A potency and the pigment carotene; but within the past four years the intimate relationship between these substances has been demonstrated repeatedly by both chemical and biologic experimental methods. It is at present well

established that the plant pigment carotene is transformed to vitamin A in the animal body. Although there is a considerable mass of evidence relating to the qualitative relationship of carotene to vitamin A, only recently have studies been reported bearing on the quantitative transformation in the animal body. The studies of Morgan and Madsen are among the first to attempt to obtain a quantitative estimation of the transformation of carotene to vitamin A in the organism. These studies indicate that within the possibilities of present chemical and biologic methods of analysis the conversion of this plant pigment to vitamin A is nearly complete. However, inevitable variations might be expected in this relationship due to differences of absorption of the carotene, which depends, in turn, on the nature of the plant tissue of which it forms a part. (Jour. A.M.A., April 1, 1933, p. 1038.)

Germania Tea.—In the latter part of 1932 and the first few months of the present year Carl Beyer has been pushing his Germania Tea Company. This company is reported to have for its president and treasurer one F. W. Hartman, for its secretary Carl Beyer, and for its vice-president Beyer's wife, Anna. The Germania Tea Company, it seems, was incorporated in 1927 as the Germania Novelty Company, a name that was changed in March, 1932, to Germania Tea Company. The Germania Tea concern is supposed to put out a line of "teas" from 1 to 14 in number. Germania Reducing Tea seems to be the big seller and the most heavily advertised at the present time. The advertisements, which appear in newspapers that are not above carrying the advertising of products of this type, feature one Margaret George, whose "before-and-after" pictures are played up. Two analyses have been made of Germania Tea, one by the State

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Board of Health of Kentucky and one by the American Medical Association. From the analyses of the Kentucky State Board of Health and the A.M.A. Chemical Laboratory the essential drug in Germania Herb Tea is senna. The other ingredients seem to vary with different packages. It is apparent that the physiologic effect of taking Germania Herb Tea will be that of taking senna. As every physician knows, senna is a drastic purgative and is especially contraindicated in spastic constipation and in conditions of intestinal inflammation. The persistent and indiscriminate use of purgatives as a means of reducing weight is not only irrational but dangerous. Whatever reduction may be brought about by such means is due to the fact that the food eaten is hurried through the intestinal tract before much of it can be properly assimilated. (Jour. A.M.A., April 8, 1933, p. 1126.)

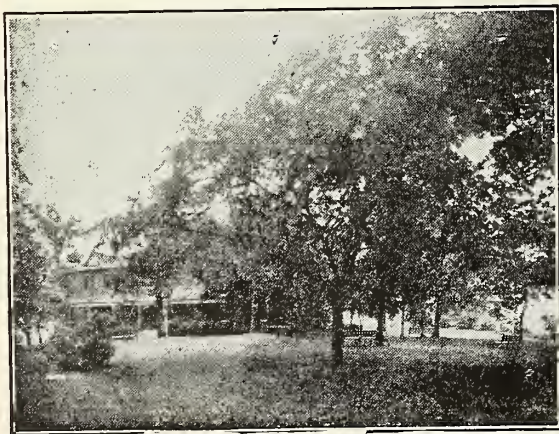
Omnadin Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that Omnadin (Prolipin) is a preparation manufactured by the H. A. Metz Laboratories, Inc., recommended for use as nonspecific lipoprotein therapy practically as a cure-all. In an advertising circular it is stated to be “. . . a sterile solution, composed of protein substances obtained from non-pathogenic bacteria (sarcina and B. mycoides), various animal fats and lipoids derived from bile.” In another circular it is said to be “. . . a combination of proteins and lipoids originated by Professor Much.” It is apparent that Omnadin is a semisecret preparation marketed under an uninformative name. The following are some of the claims made for this product: “The chief conditions in which Omnadin has proved of value comprise influenza, pneumonia, erysipelas, scarlatina,

measles, pertussis, typhoid fever, puerperal sepsis, surgical sepsis, arthritis, gonorrhea, eye infections, tonsillitis and otitis. . . colds . . . gastric and duodenal ulcer. . . It can also be used advantageously for activating specific vaccine therapy. . . It is extremely well borne by adults, children and even infants.” The Council's referee has reviewed the fairly extensive clinical literature on Omnadin of the past several years, practically all of which emanates from foreign sources. Without exception, the reports are uncritical and the observations uncontrolled. There is no reliable evidence that Omnadin involves any advance in nonspecific immune therapy. The Council believes that it must be classed as a dangerous preparation: If it contains antigenic material, claims of complete safety in its therapeutic use must be considered reprehensible; even if it has only a trace of antigen, it may yet cause allergic reactions; and if it is devoid of antigenic potency, its use is unwarranted and may carry a hazard in the neglect of more effective remedies. The Council declared Omnadin (Prolipin) unacceptable for inclusion in New and Nonofficial Remedies because it is an unscientific preparation of semisecret composition (rules 1, 2 and 10), marketed with unwarranted and extravagant therapeutic claims (rule 6) under an uninformative name (rule 8). (Jour. A.M.A., April 15, 1933, p. 1173.)

Phenolphthalein as a “Patent Medicine.”—Phenolphthalein was introduced into medicine as a laxative about thirty years ago, following the observation that certain of the cheaper Hungarian wines to which it had been added took on an actively laxative effect. Phenolphthalein is an odorless and almost tasteless powder, very slightly soluble in water. From the fact

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that it is nearly tasteless and is active in small doses, it is especially well adapted for the production of what have been called candy medicaments. Among its disadvantages is a degree of variability in action, small doses sometimes acting excessively, when at other times a large dose will fail to act. It may cause, in addition to purgation, colic, rapid pulse, difficult breathing, and even collapse. There may be no serious objection to a physician's prescribing phenolphthalein in candy form for a child, because the very conditions that surround the issuance and the use of a prescription are such as to make it highly improbable that the dosage recommended will be exceeded. It is an entirely different thing, however, to put up an active drug in the enticing form of candy or chewing gum, sell it indiscriminately to the public for self-medication, and advertise it in newspapers and over the radio by the ballyhoo methods common to "patent medicine" exploiters. It is a well-known fact that the public has a general idea that products sold as "patent medicines" are, broadly speaking, harmless. They have a feeling that the state would not permit the indiscriminate sale to the public of drugs that were really dangerous. How far this is from the truth, every physician knows, but the fallacy persists. The fact is, there is no legitimate excuse for putting up potent drugs in the enticing form of confections and selling them indiscriminately to the public. (Jour. A.M.A., April 29, 1933, p. 1358.)

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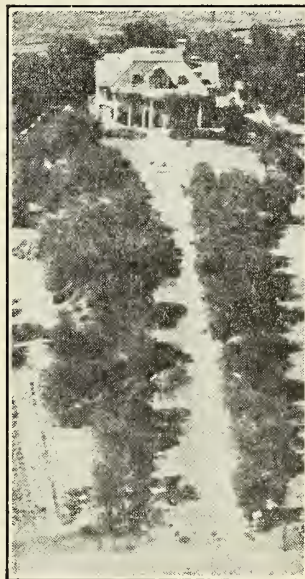
THE ROBINSON CLINIC

Pernicious Anemia is a common blood dyscrasia and is well understood by the profession. The blood picture is usually typical and the diagnosis and treatment are not difficult. But the neurological manifestations of the disease present many problems. The diagnosis is easy when the blood picture is typical, but many cases have symptoms of neurological involvement, before there are any demonstrable changes in the blood cells. When this occurs, the patient must be carefully studied and the diagnosis made early because, only by early treatment can the patient expect any relief.

There are two pathological types: First and most common, the degeneration of the central nervous system, which usually starts in the posterior and lateral columns of the thoracic cord and progresses to total paraplegia. The symptoms are numbness and tingling of fingers and toes, slowly progressive spasticity and weakness, with ataxia. The objective findings are those of upper motor neuron disease and loss of deep sensibility. Multiple sclerosis and tumors and syphilis enter into the differential diagnosis.

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ORIGINAL ARTICLES

CERTAIN PRACTICAL ASPECTS OF NUTRITION IN CHILDHOOD*

P. C. JEANS, M.D.†

Iowa City, Iowa

The public has become nutrition conscious, especially vitamin conscious. This attitude on the part of the public is made more pronounced by food advertising campaigns and by the reinforcement of foods with vitamins and minerals. Because of this attitude it becomes increasingly necessary for the physician to keep oriented in nutritional matters. Orientation is made difficult by the incompleteness of our knowledge and by the rapid development of the science of nutrition. Publications in the nutritional field are appearing at such a rate as to make a thorough knowledge of them all but impossible. Despite what might seem an over emphasis on nutrition in certain quarters, we can not afford to ignore this phase of human welfare. We must not assume, because an individual or a community survives, that the diet has been satisfactory. One of the most outstanding examples of the error of such an assumption is the prevalence of dental caries, a condition depending upon a faulty diet.

Some eight years ago it was noticed that certain of the patients in our children's hospital showed a hardening of the teeth, which previously had been soft. This change in the tooth structure was accompanied by a complete arrest of tooth decay. These phenomena were observed in diabetic children, whose diet had been closely regulated. In the course of time, subsequently, it was shown that

tooth decay could be arrested or prevented by diets of many varieties; some were high and some low in fat; others high or low in sugar; but in all instances the diets were what is known as "complete", i. e., they contained all of the known nutritional essentials in adequate amounts.

Arrest of tooth decay has been observed with such regularity when the diet has been well controlled, that we are confident it can be produced in all instances by dietary means alone. Oral cleanliness, though desirable, has been shown repeatedly to be unnecessary for the maintenance of sound teeth, when the diet is satisfactory. Different observers have emphasized the importance of some one or more dietary factors as being of primary importance in the control of tooth decay. It is our belief that there is no single specific deficiency responsible for tooth decay, and that the individual nutritional factors should not receive undue emphasis. We should not design a diet specifically for the prevention or arrest of dental caries. Rather, it would seem better to prescribe a "complete" diet, which, because of its completeness, would not only accomplish our aims in regard to dental health, but at the same time would satisfy all of the many nutritional requirements.

It is well known that a high proportion of the children of this country have dental caries. If one accepts the premise that tooth decay depends upon an incomplete and faulty diet, it becomes obvious that the average American diet is defective. That the American diet is defective is not a new observation, for it has been stated repeatedly from other points of view. The average American diet is built around bread, meat and potato. These are excellent foods, but, in making them the foundation of a diet, we run a great risk of certain specific food deficiencies. Calcium and vitamin D are most likely to be deficient. It would seem better to use

*Read before the 75th annual meeting of the Kansas Medical Society, May 2, 3 and 4, 1933, at Lawrence, Kansas.

†Department of Pediatrics, College of Medicine, State University of Iowa, Iowa City, Iowa.

as the basis of a diet the so called "protective foods." These consist of milk and dairy products, eggs, fruit and green vegetables. They are called protective foods because they contain those essential nutritional factors which are so likely to be deficient in the average diet.

Milk has been the cause of considerable controversy among physicians and nutritionists. It is true that we possess knowledge which would enable us to maintain good nutrition without milk, but, in order to do so satisfactorily, special knowledge of nutrition is necessary. Milk contains several nutritional essentials which are more readily obtained from this source than from any other natural food. The most striking example of this is calcium. A quart of milk contains four to six times as much calcium as the average milkless diet for the entire day. Normal growth requires several times the amount of calcium obtainable from a milkless diet consisting of the usual natural foods. Metabolic studies have shown rather conclusively that the average child requires approximately one quart of milk daily in order to add calcium to his body at a normal rate. When the milk intake is less than this amount, the rate of growth is not necessarily disturbed, but the chances are great that the skeleton will not be calcified to the optimum extent. In the average child a pint of milk daily permits calcium retentions far less than the optimum level.

Many physicians object to the dictum of a quart of milk a day on the ground that this quantity often robs the child of his appetite for other necessary foods. In the case of those children who have a poor appetite for other food, but who drink milk readily, it has not been established that the poor appetite is dependent upon the ingestion of milk. Except for specific reasons in individual cases, it would seem preferable to maintain the standard for the growing child at one quart of milk daily.

In connection with the calcium requirement we encounter the question of the utility and availability of various calcium salts. We have found from balance experiments that some of the salts which have been recommended are poorly

utilized. The one best utilized of all we have tried is dicalcium phosphate. When this salt is fed, both the calcium and the phosphorus retentions may be comparable to those from milk. In order to have good retention of either calcium or phosphorus, these two elements must be present in suitable proportion. An excess of either one causes a poor retention of the other. Good retentions of both of these elements are necessary for normal growth. Such salts as calcium lactate or gluconate may serve at times very useful specific purposes, but they are not suitable for continued administration when the object is better bone and tooth development. Some of the proprietary calcium salt preparations have as a recommended daily dosage an amount equivalent to the calcium content of 3 to 4 ounces of milk. One might well ask—why bother with such a proprietary preparation when this small equivalent quantity of milk is so readily available and so easily taken.

Vitamin B preparations are extensively advertised. The question arises as to the general need for such preparations and as to the prevalence of vitamin B deficiency. The prevalence of this disorder is difficult to determine. We have no definite measure of moderate degrees of vitamin B deficiency. As judged by the content of the average American diet, vitamin B may readily be moderately deficient in the diet of a considerable number of people. The published reports of clinical observations are not conclusive in this respect. The improvement reported in some of the feeding experiments may have been due to factors other than the vitamin B content of the dietary additions. It is definite that vitamin B deficiency causes loss of appetite. However, if vitamin B addition is the only change made in the regime of a child with poor appetite, the chances are great that no improvement in the appetite will be noted. Poor appetite in the child is dependent upon psychic factors and feeding habits in a high proportion of cases. If vitamin B deficiency is present in addition, it is difficult to detect. It is true also that vitamin B deficiency causes atonic changes in the intestinal

tract which may lead to constipation. Despite this fact, one rarely encounters a child whose constipation is relieved by the addition of vitamin B. In evaluating this statement it is necessary to realize that wheat germ preparations have laxative effects which are entirely independent of their vitamin B content. The relief of constipation by wheat germ is not evidence of a preceding vitamin B deficiency, despite many 'advertising inferences to the contrary. Whether or not a moderate degree of vitamin B deficiency is common, it seems definite and well established that a good, well balanced diet of common natural foods supplies an adequate amount of vitamin B for growth and health, and consequently no need exists for special vitamin B preparations for every day use by the normal individual when proper thought is given to the diet.

The pathological picture produced by vitamin A deficiency is now well established. It includes changes in the epithelium of the nose and throat which make these areas more susceptible to secondary invasion by bacteria. Thus, vitamin A deficiency can become a predisposing cause of upper respiratory infection and sinus disease. When a patient comes under care with a history of frequently recurring upper respiratory infection, it is desirable to be certain that a sufficient amount of vitamin A is being ingested. In order to attain this certainty, often cod liver oil is prescribed. At the same time one should not be too greatly disappointed if this therapy fails to accomplish a decrease in the amount or frequency of infection. Upper respiratory infections occur from other causes than vitamin A deficiency. This is especially true of such specific infections as the common cold. Few would expect to create a specific immunity by nutritional means. Yet our current literature contains a number of reports of failure to reduce the frequency of the common cold by cod liver oil administration, and these reports carry the inference, at least, that vitamin A is of little value as an anti-infective agent. It is desirable to recognize the fact that vitamin A deficiency may lead to respira-

tory infections, but at the same time it is necessary to keep oriented to the extent that we do not deprecate vitamin A because it fails us in instances in which we really should not have expected success.

Vitamin A deficiency of sufficient degree to produce the well known and outspoken symptoms characteristic of this deficiency is rare in this country. We have no good idea of the prevalence of a moderate deficiency of this vitamin. In searching for a clinical measure of moderate vitamin A deficiency it occurred to us that night blindness might serve such a purpose. By means of a photometer we have determined the speed of recovery of acuity of vision after exposure to a bright light. We have found that approximately 10 per cent of the children applying to our children's hospital for treatment have a loss of visual acuity in the dark, and that the visual acuity can be restored by cod liver oil administration. We believe that we have established the validity of this procedure as a method of determining vitamin A deficiency. We would attach no special significance to the incidence figures we have obtained up to now, except possibly they permit us to state that in this particular class of children moderate deficiency of vitamin A is relatively common. From this finding we would not draw the inference that vitamin A concentrates are indicated routinely in the everyday feeding of children. It is our opinion that a good diet will supply an adequate amount of vitamin A, and that ordinarily the use of a good diet is the better method of obtaining this vitamin.

Animal experiments in our own clinic and elsewhere have shown that ingested mineral oil carries away in the feces some of the vitamin A of the food. When the amount of vitamin A permitted the animals is only sufficient to meet the minimal requirements for growth, the addition of mineral oil to the diet in amounts proportionate to the usual human dose causes the animals to die with signs and symptoms of vitamin A deficiency. When the animal receives larger amounts of vitamin A, mineral oil does not have this effect. We encounter few opportunities to determine the applica-

tion of this experimental finding to the human. Recently a child with loss of visual acuity in the dark failed to recover normal acuity of vision after the administration of cod liver oil for several months. She had been taking a generous dose of mineral oil daily. Her vision became normal very soon after the administration of mineral oil was discontinued. It seems entirely possible that ingestion of mineral oil may be a contributing factor in vitamin A deficiency in the human.

The beneficial effects of an abundant and complete diet are manifold. In addition to preventing the various deficiency diseases, it will produce a more rapid and vigorous growth and will be advantageous in other ways not easily measured. By adding a little milk to the stock diet of rats, a stock diet which had proved satisfactory through many generations, Sherman has produced some very significant results. The rats which received the improved diet grew at a more rapid rate, reached maturity earlier, had a longer period of maturity and a delayed senescence. In our own work, when an abundant diet has been fed, we have observed a rate of growth considerably greater than the average, both in babies and in children at various ages. It is not improbable that the type of results cited as obtained by Sherman with rats can be attained also with the human species.

Throughout this presentation the general argument has been that for the great majority of our patients we do not need special diets nor special vitamin concentrates or mineral additions. It may be true that a survey of the population will reveal a relatively large and possibly unsuspected amount of nutritional deficiency of various sorts. Nevertheless an adequate diet of common natural foods will satisfy all of these needs. An exception might be taken to this attitude in the case of vitamin D during those seasons of the year when an adequate amount of sunshine is not available. In all instances of doubt, it is preferable to assure an abundance of the various food essentials, even though the means employed to supply them may be more or less artificial.

IN MEMORIAM*

J. T. AXTELL, M.D.†

Newton, Kansas

This hour we devote to our brothers; to our fellow-workers who have passed on to the Great Beyond. It is with sincere reverence and a feeling of great loss that we remember them. Last year they were with us, a part of us; we heard their kindly greetings, their words of counsel and advice in all our problems. Today, their voices are silent, their chairs are empty in our midst.

While we miss them and mourn their loss, we know others are even more bereft. The communities these physicians served so faithfully feel this loss even more than we. The family physician, the family friend and advisor, the faithful repository of all the intimate family secrets is no more on earth; yet he still lives. Those he served remember his kindness, his unselfishness and untiring devotion to them, his words of wisdom and advice.

What can we say of the bereaved families: Their loss is almost more than they can bear. They are, indeed, bereft. Words of sympathy or consolation to them seem empty indeed; yet, such as they are, with our whole hearts we give them. May the Great Providence that rules the universe, yet notes the sparrow when it falls, be their source of strength and comfort.

In the year just past, we have found reports of the deaths of 60 physicians of Kansas.

It is impossible to mention personally all of those who have passed on, but we cannot refrain from referring to a very few with whom we were intimately associated.

‡Paul S. Mitchell, of Iola, the honored President of the Kansas Medical Society at the time of his death, December 28, 1932; one whom we all knew and loved.

*Read before the 75th annual meeting of the Kansas Medical Society at Lawrence, Kansas, May 2, 3 and 4, 1933.
†Chairman, Committee on Necrology.
‡Member, Kansas Medical Society.

John E. Minney died in California, April 7, 1933, at the age of 88 years. He was one of the founders of the Kansas Medical College at Topeka, and dean of the school for 25 years. He was a former member of the society.

‡Arch Doerr Jones, of Wichita, was a near neighbor and dear friend of mine. He was prominent in all society work for many years.

‡Ralph Waldo Hissem, of Wichita, was a most promising specialist and in his untimely death the society has sustained a great loss.

‡Max Miller, of my own city, was a most faithful practitioner and member of our society. Harvey County has sustained a real loss in his death.

‡Hunter J. Duvall, of Hutchinson, was a personal friend and a credit to his community and the society.

‡Chauncey S. Kenney, former President of the Kansas Medical Society and for many years Superintendent, State Sanatorium for Tuberculosis at Norton, died in Newton, December 1, 1932. His whole life was devoted to the relief of the Great White Plague, and he was loved by everyone who knew him.

The following completes the list:

Isam Henry Anthony, Kansas City.

Henry Bacon, Scammon.

‡Joseph Brewer Blades, Independence.

Samuel Haskell Blakely, Topeka.

‡George Edwin Bush, Geneseo.

William Casper Cecil, Parsons.

Joseph H. Close, Topeka.

‡William Hazzard Cook, Beloit.

‡Samuel Joseph Dobson, Edna.

Faye Donovan, Medicine Lodge.

Adolphus M. Doyle, Leoti.

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William H. Finley, Turner.

John Wesley Graham, Wetmore.

Alford Gifford, Lawrence.

‡Alonzo L. Golightly, Topeka.

‡Joseph J. Growney, Kansas City.

‡Albert Eugene Harrison, Herington.

‡Frederick John Haas, Leavenworth.

Harvey L. Hayes, Kansas City.

‡William Cyrus Hayhurst, Ottawa.

James W. Hempsted, Burrton.

James W. Henderson, Ft. Scott.

William Rankin Hendy, Arkansas City.

‡John Harrison Henson, Mound Valley.

Charles Foley Howe, Atchison.

‡David William Howells, Caney.

‡Ralph Waldo Hull, Nortonville.

‡Ralph Elmer Jenkins, Pittsburg.

Noah Samuel Jenkins, Kansas City.

Napoleon Dudley Kean, Olathe.

Nathaniel Adair Kidd, Hays.

‡Charles Frederick Little, Manhattan.

William Burr Littreal, Hiawatha.

‡Cyrus Decker Lloyd, Leavenworth.

‡William Taylor Logsdon, Wichita.

George Chester Mahaffy, Ottawa.

Richard A. Marshall, Wichita.

Charles William Matlock, Cedarvale.

‡John B. Morton, Nashville.

‡Daniel H. Northdurft, Otis.

Russell William Reed, Alma.

John B. Rees, Mapleton.

Joseph B. Robinson, Hiattville.

‡James Nelson Rose, Hutchinson.

Benjamin M. Savage, Wichita.

Stephen E. Smith, Topeka.

‡Thomas A. Stevens, Caney.

William J. Stilson, Coldwater.

‡Charles Rouin Tinder, Girard.

Charles I. Welsh, Clyde.

‡Joseph J. Woodard, Olathe.

‡James Mann Wright, Denison.

William A. Yingling, Emporia.

Of the 60 physicians who died during the past year, the average age was 66 years. Eleven were more than 80 years; three under 40. The oldest was 96 years; the youngest 25 years. The largest number of deaths, nine, occurred in the month of December; October was second high with eight. Causes of death: heart disease, 12; kidney disease, 7; cerebral hemorrhage, embolism, 6; coronary occlusion, or sclerosis, 5; pneumonia, 4; accidents, 4; cancer, 4; diabetes, 4; arteriosclerosis, 3; cirrhosis of liver, 2; pulmonary tuberculosis, 2; brain tumor, 1; pancreatic cyst, 1; pernicious anemia, 1; strangulated hernia, 1; paralysis agitans, 1; leukemia, 1; and senility, 1.

May we stand for a moment with bowed heads in honor of our departed brothers.

TULAREMIA: SUMMARY OF 120 CASES REPORTED IN KANSAS*

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The discovery of a new disease is always an important milepost in medical history. Lack of thoughtful consideration has given rise to the widespread assumption that the sole function of medical science is the curing of disease. This assumption is perhaps true with the vast majority of medical men and women actively engaged in medical science, yet it is also true that communicable and infectious disease comes from without the individual, and before intelligent treatment or research for a cure may be instituted, a definite knowledge as to where the infection is acquired, its portal of entry in man and its site of localization must be gained.

There is but one instance in medical history in which the role played by our own countrymen has completed our knowledge of an important infectious disease. Developing it from isolation of the etiological factor involved, its modes of transmission, sources of infection, pathognomonic agencies, and other essentials connected with a complete knowledge of an ailment, American investigators alone have worked out all our information concerning tularemia.

This statement of fact does not imply that the disease is not to be found in places other than the North American continent. Besides being known to be distributed over 43 states of the United States, reports show outbreaks in Canada, Russia, Denmark, and Japan. In Japan, it is known as Ohara's disease.

The name, "tularemia" is the outgrowth of application of the suffix "emia" (Greek, haima—the blood) to the name, "Tulare," a county in California where McCoy and Chapin first noted a plague-like disease among rodents in 1911. They isolated and described the causative agent the following year and called it *Bacterium tularense*. Yet

it remained for Wherry and Lamb three years later, to be the first to report an infection in man attributable to this organism.

In spite of the prediction of Wherry and Lamb, that here indeed was a plague which might rival that caused by *Past. pestis*, no funds were made available to the Public Health Service for an investigation of this disease until 1919 when Doctor Edward Francis was sent to Utah for that purpose. Since that date, however, the researches of Francis have become familiar to most of us.

Tularemia in man characterizes itself as an acute infection usually having an initial or primary lesion at the portal of entry of the infective agent, *Past. tularensis*, followed by a rapid onset of generalized symptoms.

The incubation period is short; usually begins with a headache, chills, body pains, vomiting, prostration and fever. If the infection starts from a bite, the patient complains of pain in the lymph glands draining the infected area. This is closely followed by apparent involvement of the lymphatics with the classic rubor, calor, tumor and dolor of the regional lymph nodes. Frequently this condition persists for months and is followed by the voluntary recession of these glands, or by suppuration, in which event they are either drained or excised.

Francis divides the cases he has observed into four distinct classes: the ulceroglandular, the oculoglandular, the glandular and typhoidal types. However, there is some doubt with certain investigators as to whether or not a fifth type—the meningeal type—should not be added to this classification, since definite meningitis undeniably due to *Past. tularensis* has been described.

According to Francis, the ulceroglandular type is characterized by pain in the area of the lymph glands regional to the point of infection, within two or three days of the onset. These slightly swollen tender glands usually become noticeable about a day earlier than the day on which the patient's attention is directed to the site of infection. The primary sore at the site of infection then develops as an inflamed, painful, swollen papule,

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which suppurates leaving a punched-out ulcer approximately one cm. in diameter. This ulcer becomes elevated around the edges, often indurated, and is generally replaced by scar tissue. The redness noted in the region of the lymph glands may be continuous with that of the primary lesion, red streaks being noted on the extremity. In about one-half the cases, the glands do not break down, but remain hard, tender and palpable for several months, gradually returning to normal. In the other half suppuration takes place and the abscess ruptures.

The cases classified by Francis as being oculoglandular are those which follow the same general description as the ulceroglandular, except in these, primary localization is in the conjunctival sac instead of the skin. Usually, there is a unilateral involvement of the eye and glands, though occasionally, bilateral involvement is encountered. Early manifestations include irritation, weeping, swelling of the lids and surrounding tissues, edema of the ocular conjunctiva, and a papule on the lower lid. Simultaneously the preauricular, parotid, submaxillary, anterior cervical, and in severe cases, the axillary lymph glands become involved with swelling, tenderness and pain. Soon small ulcers appear on both lids.

The purely glandular type is comprised of those cases in which epitrochlear and axillary glands develop with no initial lesion.

The typhoid type is characterized by continued remission and secondary rise of fever. The onset and duration of the disease in this type are about the same as in the other types, though occasionally these cases simulate undulant fever more closely than typhoid fever.

The diagnosis in tularemia usually should not be difficult, since the majority of cases present history of having handled rabbits recently, and when seen by the physician have definite glandular involvement with fever, presenting the typical picture of an acute infection. Yet, a large number of these cases although presenting definite evidences of ulceration, are still regarded as influenza, and often such developments as those simu-

lating pneumonia, typhoid fever, septic infection, glanders, anthrax, sporotrichosis and undulant fever tend to mask the real diagnosis.

In addition to the diagnosis from physical findings, three other methods are available: (1) the intradermal test; (2) agglutination by the patient's serum, and (3) guinea pig or rabbit inoculation with the blood of the patient or sero-pus from the ulcer or regional lymph glands.

Foshay has developed the diagnostic intradermal test which has not been found positive in any other disease. He states: "The intradermal test as a diagnostic measure permits of confirmation of diagnosis as early as the second day of disease. It is highly specific, absolutely insofar as my three year's experience with it goes, and never falsified by other diseases nor by any of a hundred or more normal people. It is no longer necessary to wait for agglutinins to appear in the blood to confirm the diagnosis."

A specimen of blood for an agglutination test should consist of at least 5 cc. and be taken in the same manner as for a Wassermann test. The agglutinins usually appear sometime during the second week. However, in two cases in this series, a positive reaction was not secured until the fifth week, although repeated examinations were made.

Simpson has succeeded in two instances in growing the organism directly upon artificial culture media from human tissues.

Influenza: No definite reason appears as to why influenza should be considered in the differential diagnosis of tularemia other than the fact that the term is used generally for all indefinite infections.

Pneumonia: The prognosis in tularemic pneumonia is grave. Onset is with chills, fever, unproductive cough and prostration. The blood picture is one of infection, with slight leucocytosis. Tureen reports a case in which for two weeks the pulmonary manifestations were those of broncho-pneumonia.

Typhoid fever: The patient is usually toxic and has a sustained temperature. A carefully taken history plus a positive

Widal (in the absence of previously administered typhoid vaccine), or isolation of the causative organism will establish the diagnosis.

Septic infection: Some infections are wholly local and symptoms result from the absorbed toxins. Others may cause a bacteremia or septicemia, while still others may result in metastatic suppuration. The diagnosis rests upon the etiology, the symptoms of toxemia and metastasis, suppuration and blood cultures.

Sporotrichosis: An acute, infectious disease due to various species of aerobic fungi. In many cases, the infection follows some trifling injury. The character of the initial lesion is quite variable. In the course of several days or weeks, a chain of subcutaneous nodules develops along the course of the lymphatics draining the part, and these gradually soften and break down in the center, producing a series of small, sharply circumscribed, painless, subcutaneous collections of pus. A microscopical examination of the contents of the abscesses is usually negative, although the organism multiplies readily on simple culture media.

Undulant fever: Because of the fact that serum agglutinins in tularemia will occasionally cross-agglutinate *Brucella melitensis* and *Brucella abortus*, tularemia has been confused with undulant fever. The proportionately higher titre reached by tularemia agglutinins and the employment of agglutinin absorption tests leave but little doubt as to the diagnosis. Evidence in the literature indicates these agglutinins remain present in the circulating system for many years following convalescence. In a series of cases studied by Francis, an average agglutinin titre of 1:140 was demonstrated as remaining after one year. In another instance after 17 years, agglutination was obtained in a dilution of 1:160.

Of the cases investigated by Francis, four per cent terminated fatally. However, from different sections of the country much higher as well as lower rates have been reported, suggesting the probability there is a somewhat wide variation in virulence among different strains of the causative agent.

Pasteurella tularensis or *Bacterium tularense*, is a small gram-negative, non-motile rod growing only on media containing an enrichment fluid with cystine, or egg media. It has a marked pathogenicity for a large number of animals and is transmitted by a few insects, making the possible number of vectors for transmission to man, many.

Besides the cottontail rabbit, animals known to be susceptible to tularemic infection include the jack rabbit, cat, wild rat, mouse, muskrat, black squirrel, fox squirrel, quail, sheep, opossum and perhaps the coyote and hog, although McCoy and Chapin first found these animals not susceptible. The causative organism has been isolated from the carcasses of some of these animals several weeks following their death. Horse flies, ticks, deer flies (and experimentally, mosquitoes), have been shown to be vectors.*

Less than twelve autopsied cases of tularemia in the human being are reported in the literature.

Simpson reports and describes the most rapidly fatal case with death in four days after onset of the illness. Other deaths have been reported within eight days after onset to several months.

The pathology of tularemia for the most part is one of an infectious inflammatory process depending upon the particular type of lesion present. In one type, the lesion or lesions are fairly typical, while in the other group, little or no pathology occurs except for the wound. A fairly constant lesion is found in the axillary lymph glands. Other more common lesions are found in the spleen, lungs, liver and conjunctival sac. The infection appears to be more virulent in animals than in man. A great number of the infected animals show gross abscesses on the liver. Numerous patients refer to the gray spots observed upon the liver of animals from which they obtain their infection.

The most characteristic pathological change in man occurs in the axillary

*Since copy of this paper was given to the publisher, we have received a case report in which the physician reported the infection was contracted while the patient was skinning a bull snake.

lymph glands: enlargement, induration and suppuration. In one reported case, epitrochlear lymph nodes were involved. In the spleen, liver and lungs, the microscopical findings are typical of an acute inflammatory process, characterized by congestion, infiltration with polymorphonuclear leucocytes, a mitotic endothelial proliferation in the capillaries causing obliteration, with resulting necrosis. Secondary necrotic foci resemble a tuberculous process. Excised masses of these tissues when implanted into animals produce the disease. In the liver there is a tendency to fatty infiltration and atrophy of the cellular cords. The kidneys show moderate congestion and glomerular nephritis. Other micropathological changes have been described in the peritoneum, myocardium, thyroid, stomach and suprarenals, but there is nothing typical of tularemic infection in these areas.

So far as it has been possible to determine, the first report of tularemia incidence in Kansas was contained in the report of Dr. W. G. Gillett, of Wichita, at the 69th annual meeting of the Kansas Medical Society in Kansas City. The date of onset of this case was October 10, 1925, and it was classified as of the oculoglandular type. However, in recent months while investigating the occurrence of the disease in the state, one case was found which had its onset November 11, 1923, and the blood still remains positive in a titre of 1:80. The original diagnosis in the latter case was septic infection of the thumb and septicemia.

The first reports to the state board of health of tularemia cases were made in 1928, eight cases being recorded. Fifteen cases were reported in 1929; 16 in 1930; 33 in 1931, and 38 in 1932. Four cases have been reported to date for the present year. While the total of cases officially reported to the health department since January 1, 1928, to April 27, 1933, is 114, additional case histories have been secured so that the total of cases in this series is 120. Location of reported cases is shown in Figure 1.

Tularemia is essentially a seasonal disease. Due to the fact that the great majority of cases are contracted from rab-

REPORTED TULAREMIA CASES, 1928-33

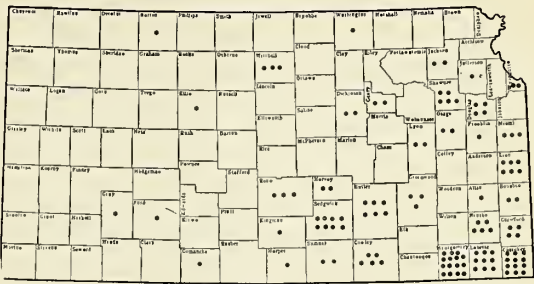


Fig. 1

bits, the highest incidence would naturally occur during the hunting season—October to January inclusive. Owing to the overlapping of the tick and fly seasons, cases may be encountered in any month of the year. Those resulting from tick bite infection usually occur during March to August; fly bite infections from June to September. In this series of cases, 70.0 per cent had their onset in the months of November and December. The onset of the infection by months was as follows:

	Number	Per Cent
January	6	5.0
February	1	0.8
March	5	4.2
April	3	2.5
May	3	2.5
June	3	2.5
July	1	0.8
August	3	2.5
September	3	2.5
October	6	5.0
November	50	41.7
December	34	28.3
Unknown	2	1.7

Occurrence by Sex and Age: One would naturally conclude that since men are in the great majority as hunters of

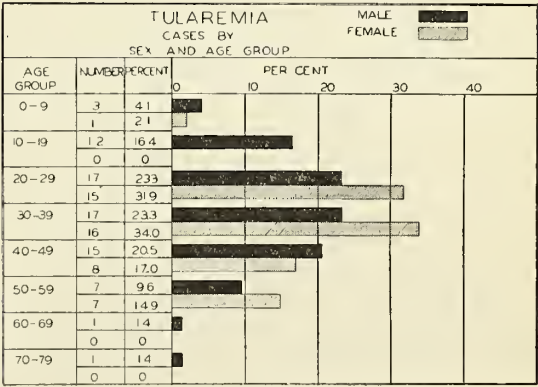


Fig. 2

wild game, comparatively few cases would occur in women. However, in this series, 47 of the cases were reported in females; 37.5 per cent. The occurrence of cases by sex and ten year age groups is shown in Figure 2.

Location of Lesion: The primary lesion in 102 of the 112 cases was on one hand; 5 cases had multiple lesions; 2 on the mouth; 2 on the eye; one on the right great toe, while the site of infection was not stated in 8 cases. These data are shown in Figure 3. Multiple lesions occurred as follows: (a) Dorsum of left hand, right shin; (b) Thumb and index finger, left and left eye; (c) index and middle finger, right; (d) thumb and index finger, right, and (e) palm of right hand, dorsum of left. (Fig. 4.)

Mode of Infection: Skinning or handling wild rabbits, or preparing them for cooking was given as the mode of infection of 105 cases. Other methods included: skinning opossum, 2; dressing quail, 2; dressing quail or skinning squirrels, 2; skinning squirrel, 1; bite of wood tick, 1; fly bite, 1; and handling a cat, 1; the latter probably a mechanical infection. The method of infection in five cases was unknown or not given. Of the 105 rabbit contact infections, 98 were cottontails and 7, jackrabbits.



Fig. 4

incubation period was reported as less than 8 days, and in 59 of these, the infection developed before the end of the fourth day. Ninety-three patients averaged 12 days from the time the infection developed until a physician was consulted, and an additional five days elapsed before the diagnosis was made. However, it is interesting to note the increasing proportion of cases in which a provisional diagnosis is made on the first visit to the physician. Only 11.1 per cent of cases in 1928 were provisionally diagnosed as tularemia; 25 per cent in 1929 and also in 1930; 40 per cent in 1931, and 45.1 per cent in 1932.

Case Fatality Rate: Two deaths have occurred in the series of 120 cases, a case fatality rate of 1.6 per cent.

In the series of cases under discussion, a total of 73, (61 per cent), reported the aid of agglutination tests for diagnosis. Of this number, only 9 were taken within the first 10 days of the infection. Otherwise, the number of days developing between onset and agglutination test ranged upward to 60 days, with the largest number falling within the first three weeks. This is perhaps a criterion of the alacrity of the observing physician rather than an index of the development of these antibodies. The average of the dilutions in which agglutination occurred among the specimens submitted within three weeks after onset was 1:900.

A consideration of the results of blood serum agglutination tests made on 35 of these individuals after a lapse of more than one year after onset, confirms the

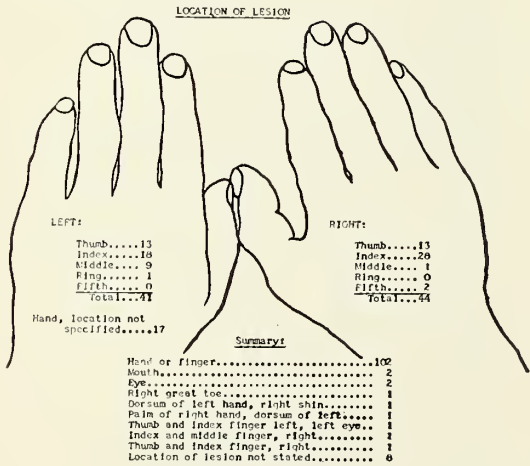


Fig. 3

Incubation Period: The incubation period averaged 4.5 days in 95 cases. In two cases it was reported as 9 days; in six cases as 10 days, and in two cases as 14 days. In the remaining 83 cases, the

previous observation that these agglutinins remain in the circulation indefinitely after convalescence. While it is impossible to attempt to correlate the degree of acquired immunity with agglutination titre, it is of particular interest to note the duration of these bodies in high dilution after so great a lapse of time, as follows:

Time Since Onset	Number of Cases	Average Agglutination Titre
13-24 months	15	1:575
25-36 "	9	1:425
37-48 "	4	1:900
49-60 "	3	1:500
61-72 "	2	1:1900
85-96 "	1	0
9 years	1	1:80

Attention is directed to the fact that after five years, two cases gave agglutination in an average dilution of 1:1900. It is also a noteworthy fact that only three of the 35 specimens, (8.5 per cent), gave entirely negative results. Of these three, one had never before had an agglutination test; one was negative at the time of the infection; and the third while given an agglutination test at the time of activity, shows no record of the result other than it was positive. Using these data as an indication of acquired immunity, one may readily perceive that a high percentage of these infections confer immunity.

PREVENTION

From a practical viewpoint, control of tularemia consists chiefly of measures which will prevent the transmission of the infection from the carcasses of rabbits and other animals to man. This is best accomplished in the education of hunters, housewives and others who handle wild rabbits as to the danger of infection and the manner in which it is acquired. Rubber gloves should be worn by those who handle wild rabbits. Rabbit meat, thoroughly cooked, is harmless for food. It has been found that a temperature of 56° C. or 133° F. kills the infecting organism.

Tularemia patients may be regarded as non-infectious to the extent that no isolation or quarantine is required. However, those who are dressing tularemic lesions should exercise due care in avoiding contact with any of the body fluids

of the patient such as discharges from the ulcer or glands, the blood or serum.

Efforts to treat active cases of tularemia with a vaccine, as well as the recent work of Downs, show the great difficulty encountered in attempting artificial immunization.

TREATMENT

Confinement to bed is of utmost importance during the acute stage of the disease. It is unwise to attempt drainage of the enlarged regional lymph nodes unless there is definite evidence of supuration. No evidence has been offered as yet that any chemical or drug affects the course of the disease.

Immune serum, however, may be of some value. Simpson reports eight of his patients who were suffering from acute tularemia were transfused with varying amounts (200 to 500 cc.) of blood from compatible donors who had made a complete recovery from tularemia. This form of treatment appeared to arrest the progress of the disease. No conclusions, however, could be drawn from the apparently favorable response in such a small number of cases.

Foshay has developed an apparently potent goat antiserum for the treatment of tularemia. "That made from virulent strains of *P. tularensis* is far more potent than that made from avirulent strain. Unpreserved serum is far more potent than that containing any preservative. Two doses of about 15 cc. each, on successive days by vein, are much better than only one dose, or than two doses under the skin or intramuscularly. Typhoid types, or any glandular type with glands larger than 5 cc. in diameter, should have three or more such doses daily, or perhaps larger amounts."

To date, Foshay has treated or supplied antiserum for about 75 cases and has complete records of about 40. Preliminary studies showed a very definite and marked favorable change in the treated cases, as regards duration of fever, duration of adenitis, total duration of disease, hospitalization period or bedridden period, duration of the primary lesion, and the elapsed time between infection and resumption of nor-

mal duties. In treated cases, the duration of the disease was 2.5 months as compared with 4.5 months in the (78) control cases.

One primary serum reaction was observed in about 170 serum injections. Serum sickness was observed in approximately 25 per cent of cases. With the exception of two or three cases, it was mild and of short duration and easily and effectively controlled by small doses of adrenalin.

SUMMARY AND CONCLUSIONS

1. Tularemia is an acute, infectious disease, usually having its origin in wild rabbits; although many cases have been reported as originating from contact with other animals, insects or birds.

2. During the past ten years, because of its almost world-wide distribution, tularemia has become a major public health problem.

3. Report is made in this paper of a series of 120 cases as to the infecting medium, location of lesion, seasonal distribution, serological distribution, serological findings and other data.

4. Serological reexamination of 35 blood specimens collected from one to nine years after infection, substantiates the observation that agglutinins remain in the blood indefinitely.

5. The diagnosis of tularemia, should offer comparatively little difficulty, provided the physician is familiar with the symptoms of the disease, a careful history is taken and laboratory methods are employed to confirm the diagnosis.

6. A goat antitularense serum has been developed by Foshay. Preliminary reports indicate this serum is of definite value in the treatment of acute tularemic infections.

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A METHOD OF CLOSED PROSTATECTOMY

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From an historical point of view it is difficult to learn just when prostatic surgery had its birth. It is not difficult, however, to trace closed prostatectomies beginning with Guthrie in 1832, and others soon thereafter, who used cutting instruments and punches. A distinct impetus was furnished this "Modus Operandum" by Bottini in 1873, who devised a galvano-cautery blade for cauterizing its way through an hypertrophied prostate. His instrument was improved a few years later by Freudenberg whose efforts received scientific attention. The results, however, must have been unsatisfactory because despite the pseudocharlatanism of men like Peter Freyer the suprapubic approach has been developed almost entirely upon all of this background. Dr. Hugh Young states that so far as he knows the first two stage operation in this country for prostatic hypertrophy was done by him and his associates in 1898 upon a man, 53 years of age, brought to the hospital in uremic coma, who could not be catheterized. After the first stage they witnessed for the first time the remarkable improvement with which we are now more familiar. It is interesting also to know that during the second stage—which occurred some time later, the gloved finger of an assistant was inserted into the rectum to facilitate enucleation of the deeper portion of the hypertrophied gland. In summing up

this brief historical resume, one feels constrained to say we have before us today two principal methods for the relief of the symptoms produced by the inability of a patient to empty the urinary bladder because of an hypertrophied prostate gland: (1) The transurethral coagulation by electrical means and, (2) the extraurethral approach, either suprapubic or perineal.

In setting out to discuss this subject from the point of view of the general surgeon let it be clearly understood that we have no quarrel with the transurethral prostatectomist. We only ask the urologist as well as the surgeon remember the thought so aptly expressed by Lord Bacon: "*Truth is not the child of authority, but of time.*"

Unfortunately, at present not sufficient time has elapsed to approach an exact evaluation of the place in our armamentarium of this new transurethral instrument. Dr. Young opens his paragraph on operative treatment of hypertrophied prostate with the following sentence: "*The pendulum has swung back and forth for many years and it is still not at rest on the question of what is the best operation for prostatic hypertrophy.*"

The transurethral method may prove to be the "Open Sesame" to all individuals needing help from obstruction of the urethra. We are not of this opinion as yet, however, but will withhold final judgment until time has proved the truth.

In the meantime we are still confronted with the individual whose fate it is to have lived long enough to be considered among the aged or near aged whose chance of having prostatic enlargement with or without symptoms is high. The statistics of Sir Henry Thompson are often quoted and rarely denied—of all males over fifty-four years of age, one in three has some enlargement—one in seven some obstruction, and one in fifteen must have some treatment.

The belated relief sought by this one of each seven past the age of 54, in our system of managing the sick must be shared by physician as well as patient.

If the average physician were sufficiently careful in his examination of

males past 54 years of age, with the knowledge that one in seven has obstruction, some of the emergencies of the one in fifteen could be prevented. Whether any immediate procedure is either indicated or done, is of lesser importance to the individual at that time, than the information he should receive concerning the danger signs which should bring him to early treatment. The experience of so many prostatectomists dictates operating as soon as one is sure it *is* or *will be* necessary because of the benefits which accrue to the patient, of improved function and assurance against renal impairment.

Regardless of the type of prostatic procedure used by the operator, there are but two cardinal objectives worthy of consideration: first, a living patient, and second, one who can micturate with a minimum of difficulty.

Certainly today, if we use modern knowledge based on statistics of larger clinics we can better judge the operative risk than ever before. To maintain the first of these cardinal objectives, the evaluation of the risk must be done before any operative procedure, regardless of its type; and while each patient is an entity unto himself, wherein the art of surgery may enter, there are nevertheless some definite scientific principles which must not be neglected. Of these, there are four which we will briefly consider:

1. Evaluation of kidney function.
2. Overdistention of bladder.
3. Bacterial invasion of genito-urinary tract.
4. General care of bedridden aged.

Estimation of kidney function as it concerns the surgeon should be trustworthy and practical. The biochemical tests of the blood for nitrogen retention on the one hand and the ability of the kidney to eliminate endogenous products, (urea, chlorides, etc.) and exogenous products, (methlyln blue, indigo carmine, phenolsulphonphthalein) on the other, comprise the list of essentials. Putting it another way we need to know what *has* gone on in the kidneys as well as what *is* going on in them.

The blood N.P.N. estimation tells us what *has* happened with reference to kidney function while the estimation of excretory power of exogenous and endogenous substances tell us what *is* going on in the kidney.

No absolute rule is applicable in kidney function nor any single test of either blood or urine sufficient to judge a patient's operability from the angle of kidney function. As a general rule if we use 30 to 45 milligrams per cent of non-protein nitrogen in the blood as the normal and expect the kidneys to excrete 40 per cent of phenolsulphonphthalein in two hours we will have the best basis from which to study any particular case.

If non-protein nitrogen is high and we know that the operation should be done we remember Dr. Keyes' rule, which is that, no accumulation of non-protein nitrogen need necessarily justify a fatal prognosis but very few patients survive the accumulation of more than 5 milligrams per cent of creatinine per 100 cc. of blood.

Any individual with moderate impairment of kidney function may possess a sufficient amount of that invaluable quality known as "flexibility" either to have mislead us on our interpretations, especially with reference to what *is* going on in the kidneys, or to be able to be sufficiently improved to render him operable. Bed rest, adequate fluids, heart stimulation, according to the specific needs may permit sufficient improvement to allow operating where time is not too important a factor.

The concentrating power of the kidneys may eventually prove a very satisfactory aid. The feeding of definite solid foods and allowing a limited fluid intake over a sufficient length of time and measuring accurately the specific gravity is not difficult. If the kidneys fail to concentrate the urine to 1.026 or above they have failed to properly do their work and the greater the deficiency below that mark the greater their impairment. As yet there seems no agreement on where the operable point may be but this may come with a more standardized technique. This functional evaluation

may be affected by many things ranging from perspiration to psychic stimuli.

To the prostatectomist no criterion of operability is quite so important, naturally, for renal deficiency is the result almost invariably of changes from the normal in the organ he wishes to remove.

THE OVERDISTENDED BLADDER

For some reason, unknown to me, I was licensed to practice medicine without knowing that the overdistended bladder presented any other than one problem—and that was to get it empty as quickly and painlessly as possible. Perhaps for this reason I embrace this opportunity to give briefly the results of a little experience and considerable reading on the effects of this condition. Let me emphasize at the outset that I feel as dubious of the life of the patient who walks into my office with the so-called "silent" distention of the bladder as though he had inoperable cancer of the prostate. He will not believe he is ill and yet his chance for more than two weeks of life is often much less than the cancer patient.

Nature objects seriously to sudden overdistention anywhere but this individual does not experience the pain of sudden overdistention—he urinates frequently though not adequately and never empties his bladder. Nature deals differently here and compensatory mechanisms arise which delay for a time injurious effects even though ultimately destruction of the organ or system is inevitable.

From the very moment that the prostate begins to really impede the outflow of urine the renal system begins to suffer. First a muscular hypertrophy of the bladder followed soon by dilatation, then ureteral back-pressure and dilatation followed by the same process in the renal pelvis, then the calyces of the kidney are dilated throwing pressure on the renal tubules with ultimate thinning of the parenchyma of the kidneys and atrophy of the epithelium. Obviously, the most important point clinically in this picture is the effect upon the vascular supply of the kidneys leading to the failure of kidney tissue to be nourished and finally to its complete disorganization. The late

appearance of clinical manifestations is due to nature's generosity in supplying an overabundance of renal tissue for our actual needs.

If the pressure is suddenly released the early manifestations of trouble are slight—usually for two or three days bloody urine is passed or withdrawn but the kidney structure fails—both the quantity and quality of urine become unsatisfactory and drowsiness slowly overwhelms the patient and about the fourteenth day he succumbs.

Silent distention of the bladder, if more than half way to the umbilicus or above this point, should be handled with slow lessening of the overdistention. The higher above this point the fundus of the bladder is found the slower must be the decompression. If the fundus is above the umbilicus the patient should be put to bed and dehydrated by epsom salts—sweats and limited fluid intake until the fundus of the bladder is below the umbilicus before any urine is released.

The problem of release is also difficult. Campbell in 1927 showed that the release of 30 cc. of urine reduces intravascular pressure 25 per cent and 120 cc. reduces it by 50 per cent indicating that slow continuous drop evacuation is far safer and superior to small quantities at regular intervals.

Creedy has furnished an excellent resume of the subject and some observations concerning the real cause of death following release of overdistention. Uremia was diagnosed in most of those studied—but, as he points out, uremia may mean little or much. Autopsy indicated, however, that 79.8 per cent of those studied following decompression died of uremia and of these chronic pyelonephritis claimed 71 per cent and acute pyelonephritis 28.6 per cent. One wonders then if the kidney tissue in the presence of pressure may not be especially prone to infection in the 71 per cent—and our means of emptying the bladder is the principal etiological factor in the production of the acute infection in the 28.6 per cent.

In concluding this short discussion, the "acute distention" from obstruction has been neglected because, while it is impor-

tant yet the immediate future of the patient is less hazardous and, too, because the rule we use is applicable in both instances; it is this:

The *slowness* and *continuousness* of release of pressure in the over distended urinary bladder must be inversely proportionate to the *duration* and *extent* of distention and surgical cleanliness used as far as possible.

An overdistended bladder may rupture, they have been known to do that. Our plea is, however, that regardless of whether from bacterial invasion or release of back pressure, certain death from kidney failure is imminent, in the case where "silent" dilatation is general throughout the urinary system and the pressure is suddenly released, whereas, the danger of spontaneous rupture of an overdistended bladder, is rare enough to make the evidence overwhelmingly in favor of conservatism.

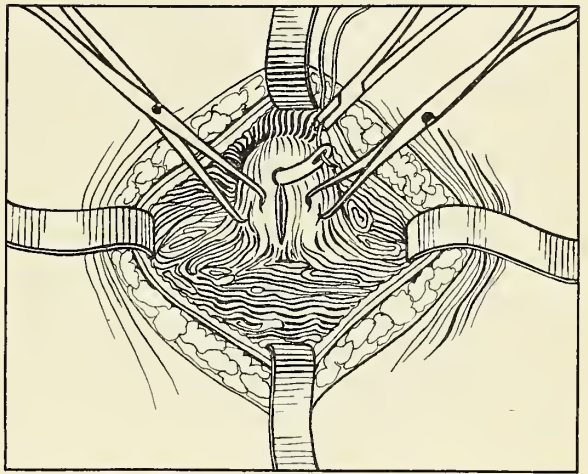


Fig. 1

Diagram showing retraction, elevation of gland, opening of capsule and placement of silk worm gut suture through inner end of urethral catheter.

RENAL INFECTION

Infections of the urinary tract are now well understood but still uncontrollable. They are best classified as ascending and descending and may spread through the lumen, lymphatics or blood stream. Thomas, Exley and O'Brein in a study of the causes of death following prostatic obstruction concluded that in 93 per cent urinary infection was the major factor. They discovered also that 93 per cent of the patients studied had been catheterized; 40 per cent of these patients were

not operated. Catheterization has for years been considered pathognomonic of urinary infection. No means, unfortunately, has yet been devised to entirely obviate the use of a urethral catheter. Since the colon bacillus, staphylococcus albus, various diplococci and smegma along with our well known gonococcus are in the order named, except the last, most commonly found, no other proof is needed of the danger of urethral invasion—no technique can prevent eventual infection in most cases if continued catheterization is used. When distention has occurred the resistance of the urinary system to bacterial invasion is lowered. We wonder if the transurethral prostatectomist may not have an advantage here but it is certainly against time honored surgical principles to operate in a closed field on an area already infected.

In prostatic surgery the infected genito-urinary tract of an elderly person furnishes a definite risk and we believe that this effect is sometimes a determining factor in the kidney function, chronic infections reducing, if they involve the kidney, the eliminating possibilities of the kidneys. The patient may have a reasonable tolerance to a chronic infection but not to an acute one. Chronic infections are less deterrent to the surgeon than acute but it is well to give thought to lessening, at least, the infectious process if possible by ample fluids, care being taken not to overburden the kidneys, heat and by irrigation preoperatively.

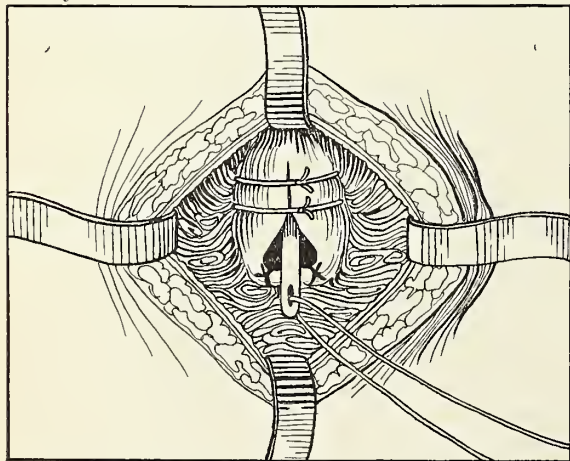


Fig. 2

After enucleation of prostate the capsule sutures for control of hemorrhage. Silk worm gut out through abdominal wound.

POSTOPERATIVE INFECTION

We know much better now since the work of Goldstein and Abeshouse the possibilities of infection in and near the prostatic bed after its removal. The incidence of these is greater than one would suppose and they consider them the result of infection already present locally, more frequently than of haemolytic, lymphatic origin or surgically induced.

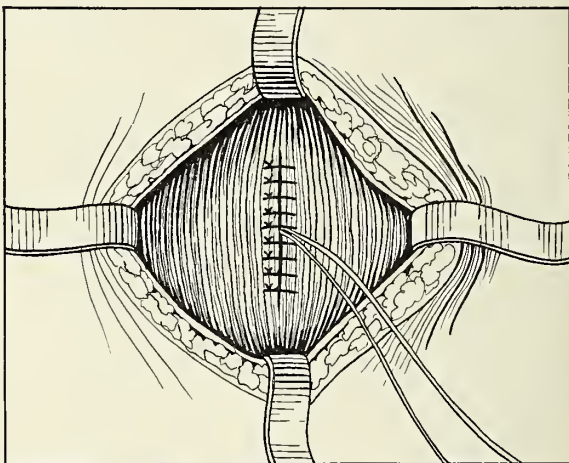


Fig. 3

Longitudinal closure of bladder wall with interrupted sutures tightly around the silk worm gut.

We feel justified in calling attention to this point especially because one of our own mistakes has been in permitting this error to cloud the postoperative course of two cases before realizing that they were there, until drainage had established itself; whereas prompt recognition of its presence and early drainage helps materially. The symptoms need not be reiterated here because local and constitutional evidence are pronounced if the prostatectomist realizes that his responsibility does not end after the surgical procedure is finished. The prevesical type may be easily drained through the suprapubic incision while those in and near the prostatic bed are best drained through a perineal approach.

Let me conclude this brief statement on urinary infections as they concern the prostatectomist with the statement that for the patient's sake, their recognition is of first importance. The ideal appropriate treatment with neither over-emphasis nor under-emphasis taxes the best that is in us but is one worthy of the effort.

CARE OF THE AGED

The care of the bedridden aged has advanced along with scientific discoveries in metabolism, renal and circulatory function, to a place where we may be justly proud of our ability to help through a surgical ordeal the helpless men who are on the downward slope. John B. Murphy was responsible for as much in this field as any one individual. Many times he reiterated by spoken as well as written word that *"The patient is the center of the medical universe around which all our works revolve and toward which all our efforts tend."*

The aged body does not lend itself easily and readily to a constant reclining position. Most men of this type have been active for many years and the more or less sudden diminution of physical movement gives rise to a circulatory stasis responsible for many pathological entities ranging from dementia to pneumonia. The aged patient who must be kept reclining for considerable time does much better if brought to this state gradually over a period of at least ten days and he does better still if this period is shortened as much as possible. We permit these patients to sit up in bed early in their postoperative course and move them around much, putting their feet out of the bed often the second or third day and into a chair as soon as feasible.

Next in order of importance we supply adequate fluids for body use and elimination usually by mouth or hypodermoclysis using care not to "water-log" the patient nor over-burden the heart. Feeding is handled similarly, except that venipuncture is used for glucose injection where needed and digitalis is employed to bolster a heart musculature through an operation if there is doubt of its strength. The digitalizing is handled prior to the ordeal, of course, and always under careful scrutiny. Care of these points with the use of a closed type of prostatectomy which has thus far proved satisfactory, has enabled us to feel some degree of satisfaction in handling the small group of men who have entrusted themselves to our care at this time in life.

We are of the opinion that one further observation is appropriate to the subject in general. It is that if we all encouraged the one man in seven, according to Sir Henry Thompson's statistics, who is suffering some degree of obstruction, to have his bladder drainage improved, rather than to wait until he is one of the fifteen who must have help; we would be doing the proper thing. Probably most of the ravages of impaired urinary function which are chiefly infection and dilatation, could be obviated and mortality and morbidity materially reduced. We plead guilty to prejudice in favor of this plan also, because the one stage operation is then more often possible; eliminates many of the infectious dangers and lends itself best to the closed type which we prefer. We use this procedure in the two stage plan also with only the added danger of an abdominal wall infected and its healing powers impaired by the mechanical and chemical irritation of drainage.

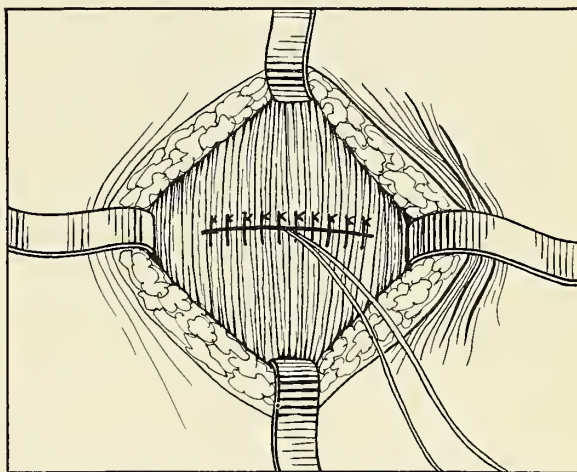


Fig. 4

Horizontal closure of fascia with interrupted chromic.

TECHNIQUE

The transverse incision is preferable and about one and a half inches above the pubis, exposure wide enough for visibility with a Cameron or other light. A catheter is left in the urethra and the prostate grasped securely with a tenaculum, the capsule opened posterior to the urethral orifice and the gland enucleated. Care is used in preserving as much of the capsule as possible. After the gland is enucleated a hot sponge is placed in the

prostatic bed for a few minutes and held there under slight pressure. Then with a boomerang needle or a needle holder of appropriate type two sutures are placed deep in the prostatic capsule one at 8 o'clock and one at 4 o'clock with the pubis considered 12 o'clock on the dial, then one or two deep transverse sutures beneath the catheter passing below the capsule which may be picked up and elevated somewhat for the placing of these sutures which pass through the anterior capsule and after placement, both are tied moderately over the catheter and capsule. Suction may be used to improve visibility. Great care must be used especially with the lateral sutures to avoid the rectum. These sutures are difficult to place but will when properly placed control hemorrhage. If there is abundant capsule a flap is picked up at 6 o'clock and drawn toward the urethra, where it is fastened deep in the prostatic bed. This furnishes a fairly good new posterior urethra.

After this is accomplished a silk worm gut suture is placed through the urethral catheter and not tied, both ends being clamped outside the abdominal wall. The bladder wall is then tightly closed around these two strands of silk worm gut with No. 1 10-day chromic gut in interrupted sutures. No. 2 chromic is used for the fascia—also interrupted sutures and the subcutaneous tissue closed with plain—and a non-absorbable skin suture, also interrupted, closes the skin.

The after-care of the patient is somewhat variable but usually little irrigation is needed. If clots form, irrigation is used moderately and carefully so as not to distend the bladder which might produce a leak. In our small series we have had no complication—no hemorrhage and no leakage from the bladder. Our series is so small, however, as to be unreliable. S. Harry Harris of Sydney, Australia, in *Surgery, Gynecology and Obstetrics*, Vol. 50, No. 1 A.P. 251, gives a series of more than 100 cases operated by a very similar method with over 80 per cent uncomplicated recoveries.

By these plans and with this technique, prostatic surgery may be elevated to the level of greater exactness and if con-

tinued study will enable us to know how to prevent infection of the genito-urinary system where overdistention is present our mortality rates may be lowered still farther.

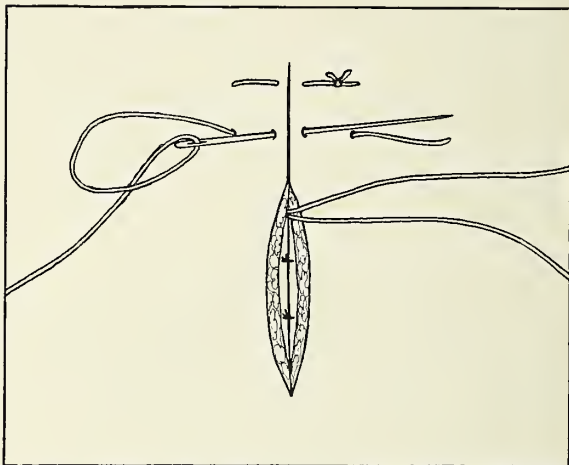


Fig. 5
A type of skin closure designed for subcutaneous hemostasis and accurate approximation of cut edges to promote rapid healing.

CONCLUSION

The art and science of healing compose a world-wide profession seeking everywhere, by similar methods, the same ends and actuated by the same ambitions. The achievements in the mechanical world during the last century are the only advancements which can be compared to those of medicine and surgery. Despite all that we have done, more remains and one of these remaining needs is to discover how to prevent infections of the genito-urinary system particularly in the presence of overdistention. We believe earlier operation will obviate much of the overdistention and that at present herein lies our most potent possibility for aiding aged men showing symptoms of urinary stasis. Since we are all human it requires enthusiasts in new modes of procedure to arrive at *truth*. May I conclude by re quoting Lord Bacon's statement: "*Truth is not the child of authority, but of time,*" and by reiterating that whatever type of procedure we use we should operate before renal and circulatory damage have occurred.

CASE HISTORY

Name: W., H. W. Married, white, male, age 52 yrs. Date: 12-23-31.

Chief complaint: "Seepage of urine" for one year and frequent urination since last June.

Family history: Married—has had two children—both living and well. Wife has had no miscarriages. Father killed by Indians. Mother died at the age of 45 of some female disorder. No brothers. One sister who has lost five children under six months of age.

Past history: With the exception of "Tropical Fever" in the Philippines and a Neisserian infection 20 years ago he describes his health as rugged.

Present illness: Began about two years ago but was scarcely noticeable until a year ago and has become worse the past six months. The chief symptoms are seepage and frequency of micturation.

Physical Examination: Temperature 98.6; pulse 74; blood pressure, 135/74. Head: Negative; neck, negative; skin, scaly; chest, heart tones clear and distinct, no murmurs heard; lungs, percussion note clear throughout, no rales of consequence; abdomen, liver dullness normal, gallbladder not palpable, spleen not palpable, no masses nor tenderness; extremities, normal; reflexes, equal and adequate; rectum, negative. Prostate, lateral lobes hypertrophied, median lobe extensively enlarged, somewhat tender. two ounces of residual urine.

Cystoscopic examination: Prostate enlarged, ureters were not catheterized. Kidney function well within normal limits. P.S.P. appearance time approximately three minutes from both ureters and N.P.N. of blood 40 mgm. per cent.

Operation: January 1, 1932. Technique as previously described except that not sufficient capsule remained to rebuild the posterior urethra. This seemed unimportant. There was moderate bleeding which lessened when the deep sutures were placed in the prostatic bed.

Postoperative care: Mild irrigation was performed through the catheter with sterile warm one per cent boric acid solution every two hours for eight hours, then each three or four hours for four days more. On the third postoperative day patient was propped up in bed and moved frequently thereafter. On the thirteenth day he sat in a chair. During this

time the abdominal wound was watched and no leak occurred. On the twelfth postoperative day the silkworm gut was removed and also the catheter and the patient began voiding immediately. On the eighteenth day patient left hospital having had a dry dressing constantly on the abdominal wound.

Progress: March 6, 1933, patient reported to office and questioning revealed no frequency of urination, no seepage and he is well pleased with his result.

PATHOLOGICAL REPORT

Name: W., H. W. Date: January 5, 1932.

Character of specimen: Prostate gland.

Service: L. S. Nelson, Salina, Kansas.

Gross appearance: Six tumor masses, largest measuring $1\frac{3}{4}$ " by 1" by $\frac{1}{2}$ ". Surfaces are irregular. Consistency firm.

Laboratory report: The connective tissue is increased in amount. Glandular structure formed with epithelial and thickened. There is a tendency to cystic formation by the enlargement of acini and thickening of the epithelium. Areas showing where one opens into another. Some acini contain a homogenous substance.

Diagnosis: Hypertrophied prostate.
H. N. M.

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R

J. C. Geiger, San Francisco (Journal A.M.A., July 22, 1933), reports two cases which demonstrate that methylene blue, intravenously, is useful, definitely beneficial and successful in the treatment of cyanide poisoning. The dye can be used in quantities up to 100 cc. of a 1 per cent solution (1 Gm. of the dye) within a period of one-half hour without untoward symptoms. The use of methylene blue, even to the extent of 100 cc. of the 1 per cent solution, did not produce measurable quantities of methemoglobin in the blood of these particular cases.

CASE REPORT

A Fatal Case of Vincent's Angina

C. E. JOSS, M.D.

H. L. KIRKPATRICK, M.D.

Topeka, Kansas

Vincent's angina is seen and diagnosed many times a day by the dentist or physician without any qualms or fear of the outcome. All have seen the typical Vincent's ulcer on the tonsil; a description is not necessary. All have their own methods of treatment. The principle of treatment depends on two fundamentals of bacteriology: (1) Vincent's organisms are anaerobic, hence they should not thrive so well in abundance of oxygen. On that point we use some or all of the various oxidizing agents. (2) Vincent's organisms belong to the Spirochaete family. Hence they should be destroyed by the various spirochaetocides, arsenic and bismuth being the two outstanding examples.

Lichtenberg et al (*J.A.M.A.* March 11, 1933), in probably the most recent article on Vincent's organisms, questions the pathogenicity of these organisms. Their conclusions are based on some well controlled experimental work as well as clinical observations. Their attempts to produce lesions in any way similar to those commonly attributed to the Vincent's organisms by injecting pure culture of fusiform bacilli into areas of traumatized tissue in guinea pigs were unsuccessful. Also the fusospirochaetal organisms were found in 45.5 per cent of tonsils removed from 108 children, while in the same children the organisms were found in 91 per cent of the membranes that formed in the tonsillar fossae after tonsillectomy. They also found that in a number of cases of severe stomatitis, all healed without treatment in from four to seven days, which is about the same as the time of those treated with the various drugs.

CASE REPORT

Present History: On November 20, 1932, the patient complained of a sore throat. It increased in severity during

the next two days, when one of us was called to see him. A heavy, dirty gray membrane covered the right tonsil. Smear and culture findings were strongly positive for Vincent's organisms; negative for Klebs-Loeffler. Fifteen grains of sodium cacodylate were given intravenously and repeated three days later. The membrane over the tonsil and edema cleared rapidly, and six days after the onset the throat had reached a satisfactory condition; the temperature at 101 to 102 degrees. During the night of the seventh day he complained of a severe pain under the sternum. Chest examination failed to reveal anything other than a few moist rales over the right base. The patient's condition became steadily worse during that day. His temperature on admission to the hospital was 99.8, pulse 108. His red blood count was 4,710,000, Haemoglobin 88 per cent, white blood count 13,500, and 95 per cent polynuclears. Blood culture was not taken. He was in a semi-comatose condition on admission and died at 6 p. m. of that day.

Past History: Usual childhood diseases. Appendix operation three years ago. Past health has been fairly good. Six months before his fatal illness he had a severe stomatitis. Tonsillectomy was advised at the time as soon as the acute symptoms cleared up.

Physical Examination: A well developed young man lying in bed showing all the signs of a severe infection.

Eyes: Pupils equal and regular; external strabismus of right eye, but eye-grounds normal.

Ears: Negative.

Mouth: Tongue dry and coated. Throat injected and all lymphoid tissue edematous. Remains of an ulcerated area on the right tonsil; enlargement of an anterior cervical gland on the right side. Chest and lungs. Some moist rales heard over the right base; slight dullness on percussion over same area.

Heart: Sounds regular in rate and rhythm, no murmur.

Abdomen: Negative.

Reflexes: Normal.

AUTOPSY SUMMARY

A well nourished, well developed young male about 25 years of age.

Heart: No abnormal findings.

Lungs: Middle lobe of right lung showed many abscesses varying in size from 8 mm. to one and a half inches in diameter. A smear from the pus shows only pneumococci. There were two abscesses in the lower lobe and one in the upper, abscesses found in the upper lobe of left lung measuring about one cc. in diameter. Smears from each lung showed the same bacteria.

The microscopic aspect is of the most varied. The bronchi were filled with purulent exudate and their walls were outlined with difficulty. Around them the alveoli were filled sometimes with polymorphonuclears and endothelial cells; some other times with red cells and inflammatory cells. Their walls were not distinct and around some bronchi they formed a continuous abscess. The alveoli containing fibrin were a small number and appeared to be located in the external portion of the peribronchial nodules.

By the variety of the alveolar lesions, their disposition in foci and the location around the bronchial axis, the lesion was considered as broncho-pneumonia probably of the purulent type.

COMMENT

This case is presented because the foremost symptoms and findings were those commonly attributed to Vincent's organisms. The smears and cultures showed many fusospirochaetal organisms. The course was inevitably fatal. The fusospirochaetal organisms were not recovered in the lung at autopsy. The microscopical sections of the lung were rather typical of a broncho-pneumonia of the purulent type. The pathologist's opinion was that this type of lesion would be caused by the *Fusiform bacillus* rather than the pneumococcus.

—R—

An exceptional case of acute necrosis of the pancreas is reported by Silik H. Polayes, William Linder and Robert E. Rothenberg, Brooklyn (Journal A.M.A., April 15, 1933), in which almost the entire organ was spontaneously extruded through the drainage wound. Despite the great loss of pancreatic tissue and grave complications that arose (abscess formation and duodenal fistula followed by a jejunostomy), the carbohydrate metabolism and pancreatic digestion showed remarkably little impairment, the patient ultimately making an excellent recovery.

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Argyria From Neosilvol*

HUGH L. DWYER, M.D.†

The danger of argyria from the long continued use of argyrol is well recognized but the possibility of poisoning from other colloidal silver preparations is not generally appreciated.

The following report illustrates the danger of neosilvol when used for long periods:

A boy, aged 5 years, in the course of the annual physical examination in the schools was noticed to have a peculiar bluish tint of the skin. The mother had not noticed anything abnormal but remembers that other people had remarked on his pallor for sometime. The school physician suggested the possibility of congenital heart disease and referred the child to his regular physician.

The child was well developed and well nourished, of normal height and weight. His color was bluish-gray and this was more evident on the face than on the trunk or limbs. The sclera was distinctly blue and in the area around the nostrils the color was a little accentuated. The discoloration of the finger nails resembled the cyanosis of congenital heart disease, although of course there was no clubbing. In fact the whole picture was not unlike that of congenital heart disease.

The heart was normal and otherwise the physical examination revealed nothing abnormal. The hemoglobin was 75, the blood count was normal.

The mother stated that she had given a 10 per cent solution of neosilvol, about ten drops in each nostril, nearly every day for two years. For a short period through the hot summer months she omitted the dose except on the days he went into a swimming pool, but with this exception he always got the medicine. It was given to prevent colds. Only a small amount was purchased at a time so that

*Patient presented at the staff conference, May 12, 1933.

†Department of Pediatrics.

the solution would be reasonably fresh all the time.

Treatment was directed solely to increasing the hemaglobin with a view to making the discoloration less conspicuous.

COMMENT

It is interesting to note the discoloration, although generalized, was slightly more intense around the nostrils and in the sclera. Jackson and Babcock¹ reported a case in which there was a localized deposit of silver under the lower lid, from the instillation of argyrol in the conjunctival sac. In their case the discoloration was so definitely localized that it was removed surgically.

In addition to the potential danger of argyrol and neosilvol it should be noted that argyria has also been reported following the use of silver-arsephenamine.

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B

Banbar.—Recently in the federal courts in Pittsburgh a case was tried against one Leo Banks Barlett, who manufactured and exploited a product called "Banbar," as a cure for diabetes. The government chemists analyzed Banbar and reported that it was a water-alcohol mixture flavored with oil of peppermint and containing considerable vegetable extractive, with epsom salt, potassium acetate, uva ursi (bearberry), podophyllum, strychnine, brucine, leptandra and equisetum (horsetail). The advertising would lead the diabetic to believe that, by using this mixture, he could discontinue insulin and, for all practical purposes, eat anything that he wanted. The government was assisted in its case by a number of reputable physicians who testified as experts relative to the worthlessness of a preparation of the character of Banbar. Most of them testified, also, to treating patients who had come to them after using Banbar without results. The government lost its case, it would seem, not because of any inability to prove the worthlessness of Banbar and the falsity of the claims made for it—for both its worthlessness and the falsity of the claims made for it seem to have been demonstrated—but because, under the law, the prosecution was compelled to prove fraudulent intent on the part of the manufacturer. If the courts generally take the attitude that was taken in the Banbar case, it will be practically impossible to control the sale of even the most vicious and dangerous of nostrums, because of the almost insurmountable difficulty in proving fraud, which is essential if a conviction is to be brought in cases involving questions of therapeutic claims. If the mere possession of testimonials, not only from ignorant laymen, but also from unthinking, careless or venal physicians, is going to be accepted as prima facie evidence of lack of fraudulent intent on the part of the "patent medicine" exploiter, then the public will have little protection against the wiles of the quack and nostrum vender. (Jour. A.M.A., June 10, 1933, p. 1882).

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

Commemoration last year of the 50th anniversary of the discovery of the tubercle bacillus brought forth a number of excellent papers summarizing progress made in the fight against tuberculosis during the past half century. Among these Edgar Mayer of Saranac Lake, in his Robert Koch Lecture, reviewed critically the preventive and curative measures in tuberculosis since Koch. Our entire knowledge of infectious diseases and various related branches of learning rests upon the foundation which Koch established. It was he who devised methods which gave science the possibility of solving problems of immunity on an exact experimental basis and who taught the world how to transmit infectious diseases experimentally from animal to animal. Koch's great achievement is fittingly commemorated by recounting progress made since then. Excerpts of Dr. Mayer's paper follow.

Progress in Tuberculosis Control

Shortly after the staining of the tubercle bacillus had been described in the *Berliner Klinische Wochenschrift* Trudeau learned from Prudden the technique of identifying the organism. His interest aroused, Trudeau struggling with tuberculosis himself and already familiar with the methods of Brehmer and Dettweiler, founded the first American sanatorium at Saranac Lake.

Not long after the recognition of the bacillus came tuberculin with its rosy promise. While specific tuberculin treatment of pulmonary tuberculosis has proved disappointing tuberculin as a diagnostic procedure to reveal the presence of infection in human beings has become indispensable. The interpretation of the phenomena observed in the tuberculin reaction has brought in its wake numerous problems related to allergy and immunity such as the toxin-antitoxin theory, cellular immunity, the altered course of superinfections, fatal hypersensitiveness, etc. The mechanisms of immunity are all limited perhaps by time

and degree, operating either in one phase to fix tubercle bacilli at points of reinfection and thus prevent or retard their spread, or at other times to fail in checking their growth and act destructively against the host. The mechanism of defense has to do also with specific bacteriolysins, monocytes and leucocytes, but little is as yet known about them. Immunity may be connected as much or more with the tuberculous tissue as with the living tubercle bacilli. Meantime, we must ask ourselves whether we really are imitating nature by aiming to retain hypersensitiveness. Should not desensitization, at least during certain stages of the disease, be our aim? Passive immunity measures have for the most part been disappointing and the workers in immunization have yet much to elucidate.

CONTROL MEASURES EFFECTIVE

Public-health measures, however, have succeeded gratifyingly. Sanitation, sputum disposal, registration of consumptives, segregation of patients in sanatoria, early diagnosis campaigns have contributed much to the control of tuberculosis. Pasteurization of milk and the tuberculin testing of cattle have undoubtedly helped to lower the tuberculosis mortality in our country.

The organized efforts now made for the detection of tuberculosis in children promise a continued drop in tuberculosis mortality. Such studies as have already been made indicate a 3 to 4 per cent incidence of childhood tuberculosis and 0.07 per cent of the adult form that would in part have been unrecognized. Perhaps 50 per cent of all adult tuberculosis develops from the cases of childhood tuberculosis. Children of tuberculous families are four times as likely to develop childhood tuberculosis as the non-contact children and twice as likely to have the adult type. Statistical studies are not yet sufficiently complete to permit the generalization that the existence of a previous infection in children either predisposes to, or protects them from, subsequent active disease.

VACCINATION ATTEMPTS

The status of BCG is still in controversy. Dissociation of BCG, as well as of

avian cultures, into virulent types has been shown to occur in artificial culture media, but not in the human body. The dangers cited in the use of this method of prevention of tuberculosis in children must yet be substantiated. On the other hand, proof of a lasting immunity from its use is lacking and the many statistical studies are faulty. We cannot admit that the results of this prophylactic immunization, quoted as so favorable, have been proved. The use of dead tubercle bacilli (killed by heat) for producing hypersensitiveness and relative immunity that can be shown to last for from 12 to 18 months presents no risk; and its possibilities as a transient immunizing agent should make us hesitate to adopt such a generalized use of live bacilli as has been carried out abroad.

COLLAPSE THERAPY

Surgical measures of treatment intended to immobilize the lung have followed the conviction based on experience that rest and fresh air are still our sovereign remedies. The good results of pneumothorax treatment have overcome the former reluctance to apply active measures and have paved the way for more radical surgical methods in the treatment of tuberculosis.

It is possible that, in the past, operations have been used as a last resort in too many cases that were hopeless; and that on the other hand, many suitable cases that could have been saved have not been selected for surgical treatment.

Yet we have not yet taken sufficiently into account the pathological-anatomical nature of the tuberculous lesion nor the physiology and pathology of respiration and circulation. The treatment of advanced pulmonary tuberculosis is to a great extent the treatment of cavities, complete obliteration of which should be the ideal. The persistence of a cavity makes the prognosis grave. A more precise classification of cavities will help to define indications for treatment. The author describes various types of cavities, such as the early thin or elastic-walled of round or oval contour, the thick walled or rigid form, small multiple cavities or honeycombed in densely in-

filtrated areas; and comments on the indications for collapse treatment in each of these types.

THE SOIL

Aside from measures of direct attack upon the bacillus, advancement has been made also in our understanding of the soil of the host. Much work has been done to learn what factors of the actual disease can be produced chemically. Certain specific proteins and carbohydrates have proved to be toxic to tuberculous animals. The foodstuffs essential for the growth of the tubercle bacillus have been studied. A single bacillus has been isolated and its life cycle followed. Discoveries have been made which shed light on the role played by inorganic elements in nutrition. Precisely how calcium exerts its effects in tuberculosis, so much discussed in the past, has still to be revealed.

Whether calcium therapy in tuberculosis may play a part because of the chemical relationship of calcium to other ions and because of its pharmacological action, rather than as a basis of healing through depositions in caseous tissue, must receive some thought.

Much study also has been given to the effect of the lack of vitamins, coupled with which is the problem of light therapy. Without doubt light and fresh air affect body physiology and the patient's psychology, but exact explanations of the motive of action on the host as well as the definition of the effective spectral light regions cannot be clearly stated.

The effectiveness of the preventive and therapeutic measures applied during the past half century is reflected in the statistical reports indicating the great decrease in tuberculosis mortality in the past 30 years. Since 1900, figures in the United States show a lowering of mortality, from 195.2 per 100,000 to 67.2 per 100,000 in 1930, and it is estimated that by 1937 the level of 40 per 100,000 will be reached in certain of the Northeastern states, unless the world-wide economic depression will interfere. However, the figures for the morbidity rate still remain at a high level, but are difficult of interpretation because of the constant

improvement in means of early diagnosis and so forth. The rate of decline in mortality in middle- and old-age groups and in young male adults has continued, but the peak of mortality still remains in the group of young adult women. However, between the ages of fifteen and thirty-five years tuberculosis still remains the chief cause of death.

Preventive and Therapeutic Measures in Tuberculosis Since Koch, Edgar Mayer, Am. Rev. of Tuberc., June 1933.

—R—

THE PHYSICIAN'S LIBRARY

MEDICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 16, No. 5. (Baltimore Number—March, 1933.) Octavo of 257 pages with 16 illustrations. Per clinic year July, 1932, to May, 1933. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

The Functions of the Stomach as Influenced by Diseases of Other Organs and Their Interrelationship—Dr. Julius Friedenwald.

The author shows different cardiac diseases in which the patient complains of pain in the abdomen. With case histories he shows why this is true, then he shows cases in which the patients complain of heart symptoms when the trouble is found in the gastrointestinal tract, then he takes up cases in which there are both cardiac and digestive troubles. He gives a very fine discussion of pain in the abdomen from pulmonary tuberculosis.

Chronic Diarrheas—Dr. Thomas R. Brown.

This is a very fine discussion in which the author takes up diarrheas caused by disorders of the stomach in which no hydrochloric acid is found and also diarrheas due to diseases of the pancreas in which administration of pancreatic extract stops the diarrhea. He discusses diarrheas in both hyper- and hypothyroidism, in malignancies of the colon, in nonspecific ulcerative colitis with cures even where irrigations were of no avail. Methods are given of doing ileostomies and beneficial results by their use.

(Continued on Page 325)

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

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The Journal of the Kansas Medical Society is not responsible for statements, methods or conclusions presented in any article other than by the editorial staff.

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EDITORIAL

MEDICAL CARE OF THE INDIGENT

The Children's Bureau of the U. S. Department of Labor has announced there has been a three-fold increase in the number of visits by city and county physicians to the homes of families unable to pay private physicians.¹ The report is based on information received from such large cities as Chicago, Detroit, Minneapolis, Omaha, Akron, Cleveland, Pittsburgh, Milwaukee, Kansas City, Missouri, and Washington, D. C. Reports from eight city areas for 1929-32 show the number of home visits increased nearly 300 per cent from 1929 to 1932. Figures from 15 city areas for both 1931 and 1932 show an increase of 64 per cent between the two years.

Providing relief to the indigent has always been an important problem. In this state, provision is made by law that the county commissioners shall provide for the indigent the necessary clothing, food, living quarters and medical care. Section 39-326, R. S. 1923 provides: "It shall be the duty of the county commissioners to appoint annually a well-qualified physician to attend the county asylum, and allow him reasonable compensation for his services." Although the statute provides for medical attendance at the "county asylum," a further interpretation applies to any indigent in the county.

The question may arise as to who may be classed as "indigent." One definition is: "One who is in need of any or all of the commonly recognized necessities of life as: food, shelter, clothing, medical or surgical attention, etc., and one who is unable to provide the same for himself."

Branton² states that as far as medical care is concerned, today people are divided into three classes: (1) those who can fully pay for their medical care—the self-supporting group; (2) those who can still provide food, shelter, or fuel, but are unable to pay for medical or surgical attention—the near indigent group, and (3) those who are entirely dependent for all necessities of life—the indigent group.

Care of the indigent is naturally a community problem. Those who furnish food, clothing or other necessities for the indigent are paid for such commodities. It has been the experience of many physicians to render emergency medical service to indigent and when the bills were presented to have those bills disallowed or substantial reductions made in their claims.

In many of the counties, the county physician renders medical service to those at the county home or hospital and

1. The United States News. 1:7, 1933.

2. Branton. A. F.: Minn. Med., 16:219-221.

in the adjoining territory. Other physicians may be employed to care for those indigent in other areas of the county. In very few counties are the regular fees paid, but even though the service be rendered at less than the usual cost, payment is made according to the cost agreed upon.

One of the methods which apparently is gaining in favor is that whereby the county medical society contracts with the county commissioners to treat the indigent poor for a fixed sum which is paid into the treasury of the society. This plan has been especially favored in Iowa, and it is understood some 20 counties have such contract this year. Two Kansas counties, Barton and Ford, have employed this method for some years, apparently with satisfaction to all concerned.

The Milwaukee County Medical Society has developed a different plan, in that it has formed a corporation outside of but under the control of the society. This corporation contracts with city and county officials to provide medical care for the indigent by the payment of very small sums each month by this class in the form of health insurance.

The importance and value of competent medical care has been summarized by one writer as follows: "Medical attention is not an impersonal gift like a ton of coal, a suit of clothes, or an order of groceries, physical commodities which have their own inherent values regardless of the source of the gift, manner in which it is given, and the price paid. Medical service is an intensely personal service; it involves a mutual obligation; a tacit contract in which both patient and doctor have their parts. In addition to the physical drugs given or the operations performed, each treatment implies a mutual confidence. The doctor is to do his best; the patient is to obey orders.

But such orders often require a reform in the patient's life in those particulars which enter into the production of his disease. Such changes he will not make unless he has implicit confidence in the doctor."

United action on the part of the county medical societies is necessary if the interests of the physician and the indigent are to be safeguarded. Each society, however, is best able to solve its own problem, and in doing so, a definite responsibility rests upon its officers.

EDITORIAL COMMENT

Several deaths of infants have been reported in recent months, due to boric acid poisoning. Containers of boric acid solution should carry a warning label.

Members of the senior class of the University of Indiana Medical School were given a course in medical economics and medical ethics during the spring semester.

McMillan reports 70 per cent of a series of gonorrheal infections showed marked improvement following intravenous use of triple typhoid vaccine. (*Jour. M.S.M.S.*, June 1933.)

During the year 1932, 3,801 deaths were reported in the state from diseases of the cardiovascular system. Included in this total were 303 deaths from arteriosclerosis; 297 from angina pectoris, and 228 from disease of the coronary arteries.

Dr. Ludvig Hektoen retired as professor of pathology, Division of Biological Sciences, University of Chicago, July 1, becoming professor emeritus. Dr. Edwin O. Jordan, chairman of the department of hygiene and bacteriology, will retire October 1.

The National Board of Medical Examiners was organized in 1915. Its certificate is now recognized in 42 states and

three territories. Since 1922, when the three parts examination feature was adopted, 15,609 individuals have been examined of whom 1,558, or 11.6 per cent failed to pass.

In accordance with action taken by the House of Delegates at the last meeting Dr. Colt has named Doctors H. N. Tihen of Wichita and C. C. Nesselrode of Kansas City as a committee to prepare a statement on the question of a full-time executive secretary. It is anticipated this statement will be mailed to each member of the Society in the near future.

According to the *News Bulletin* of the Institute of International Education, May, 1933, 2,315 Americans are enrolled in the universities of Austria, Czechoslovakia, Great Britain, France, Italy and Spain. Information as to the number of medical students is available only in Austria, where 226 out of a total enrollment of 284 are medical students.

Seventy physicians who passed the examination given by the board of medical registration and examination on June 20 and 21, have been licensed. Fifty-two were graduates of the University of Kansas Medical School. Fifteen others were licensed by reciprocity. The license of Jennie E. Van Epps, formerly of Tonganoxie, was revoked following conviction of violation of the narcotic act.

Thirteen members of the society changed their place of residence or at least the office address during the month of June and did not notify the Journal. Each notice from the postoffice cost the Journal two cents, a total of 26 cents. If change of address is made, even though from one location to another in the same block, a post card should be mailed to the Journal office giving the correct address.

C. H. Ewing, secretary of the board of medical registration and examination,

reports that registration notices have been mailed to each of the 7,656 physicians licensed since the medical practice act took effect in 1901. The law provides that the notice shall be mailed to the last known address, and Dr. Ewing states this has been complied with. If the registration blank has not been received, notification should be made to Dr. Ewing, at Larned, as the individual physician is responsible for his own registration.

Dr. Bowman C. Crowell, associate director of the American College of Surgeons, at a community meeting held in St. Louis during the annual session of the college, listed the seven wonders of medicine as follows: (1) Immunity or resistance to diseases; (2) anesthesia and analgesia giving relief from pain; (3) antisepsis preventing wound infection and blood poisoning; (4) knowledge of vitamins and food values; (5) light and ventilation; (6) organotherapy such as feeding liver to pernicious anemia patients, giving insulin to diabetics, and thyroid gland extract to cretins, and (7) periodic health examinations to prevent the effects of certain diseases such as cancer.

Physicians can render a service especially to the children if some inquiry is made concerning the quality of food that the children are being given during these days of depression. It is a known fact that a child can grow apparently normally even though the calcium content of the body is sadly deficient for a time. The drain on the body's stored supply of calcium offers a serious handicap to the child's growth. With every article of diet requiring an outlay of money by those who live in the city it is to be expected that the milk supply will be sadly curtailed, and that a bulk of food may be given the youngster without regard for its nourishing and vitamin content. Keep up the milk and the vitamins. (*Jour. Ind. St. Med. Assoc.*, March, 1933.)

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

Feces Examination

One of the most common errors in the physical examination of a patient is the failure to examine the feces collected under proper conditions and using proper precautions. Considerable information may be obtained by the routine macroscopic examination of the stool, noting the color, odor, mucus, concretions, macroscopic parasites and food remnants.

Under color, the different routine terms that are used are: light or dark brown, yellow, green, clay, red and black. The normal feces comes under the light or dark brown group; the yellow stool is usually due to a milk diet, rhubarb, and certain chemicals such as santonin; the green stool indicates biliverdin, calomel or certain chlorophyllic vegetables, such as spinach; the clay stool indicates a decreased bile content; the red stool hemorrhage or some type of food such as beets, while the black stool indicates digested blood or certain chemicals such as iron or bismuth suboxide.

Odor of feces has a wide range of skatol and indol, and these are influenced by diet or disease. For example a milk diet produces very little or no odor, while the odor of a meat diet is very marked but less on a vegetable diet.

In the macroscopic examination the presence of mucus and its amount are reported, likewise concretions. Some of the macroscopic parasites are found with little effort while others require straining the specimen. A very common mistake among layman is to mistake vegetable fibres, such as pieces of orange, for parasites.

Under normal conditions the feces is alkaline in reaction; often the specimen is neutral and less often it is acid except in infant's stool.

Fresh macroscopic blood is detected with no difficulty. Older, digested blood coming from the upper portion of the intestinal tract requires a chemical test. In large amounts, no error will likely be encountered, but where traces of blood are

found it is wise to recheck the findings after instructing the patient to bring in another specimen after 48 hours on a beef-free diet. Especially, this should be followed if some very sensitive test is used, such as Myer's test. The most commonly used test is the benzidin test, where a small amount of benzidin is dissolved in 2 cc. of glacial acetic acid, adding 20 drops of fresh 3 per cent hydrogen peroxide, then overlaying this with diluted feces. I have found for routine work that Myer's test is practical and with precautions, a very dependable test.

In select cases, valuable information is obtained in detecting the presence of pancreatic ferments, amylase and trypsin. Collecting the specimen for this test is very important and every detail must be followed. The evening before the test, give the patient a light meal and at bedtime a high enema. The next morning at the selected time for starting the test, give the patient 750 cc. of milk; 30 minutes later give one-half ounce of epsom salts and repeat in 30 minutes; then 30 minutes later give the patient about one-half teaspoonful of sodium bicarbonate dissolved in some water. All stool specimens are then saved up to 2 o'clock and preserved with a few cc. of toluol. The specimens may be placed in one container as they are diluted in the laboratory. The technical procedure is very simple and dependable, where the clear portion of the stool is superimposed upon a 1 per cent soluble starch solution. A decrease of amylase and trypsin is found in pancreatic tumors. Another very valuable test for pancreatic efficiency is Schmidt's nuclear test. Based upon the knowledge that pancreatic juice (ferments) is required to digest the nuclei of muscle cells, the patient is given a small piece of hardened meat in a small bag. When this bag appears in the stool, some of the muscle fibres are scraped off and stained with any ordinary nuclear stain.

The routine test for bile is the mere detection of its presence or absence and as a rule may be determined by the color of the stool; in case of its absence, a clay colored stool results. For the laboratory equipped with a spectroscope, that is the ideal test. Most laboratories, however, must resort to a chemical test and the usual routine test is that of the play of colors upon a dried drop of feces, when a drop of concentrated nitric acid is added.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

TREATMENT OF SECONDARY ANEMIA

Murphy following treatment by various means of a group of patients with anemia of the hypochromic type records his results. The writer draws the conclusion that treatment by means of intramuscular injections of solution of liver extract (Lederle) together with adequate doses of iron (ferric ammonium citrate) by mouth is the most effective, although the combination of large doses of whole liver and iron by mouth is very effective but less readily used. Of the various substances other than whole liver which were given by mouth, ferric ammonium citrate and pills of ferrous carbonate U.S.P. were about equally effective and outranked the others in blood-building effect. The optimal dose of these salts is that which supplies daily 500 mg. of iron (ferric ammonium citrate, 3 Gm. pills of ferrous carbonate, 5.4 Gm.). Iron hydroxide used intravenously proved to be moderately effective but without advantage over the iron administered by mouth.

Treatment of Secondary Anemia: With special reference to the use of liver extract intramuscularly: Murphy, William P.: Archives of Internal Medicine. 51:656-679. May, 1933.

IRON IN HYPOCHROMIC ANEMIA

Heath presents a study of eighty-four cases of hypochromic anemia which have been analyzed with respect to their hematopoietic response to the oral administration of iron. It was found that the factors necessary in the accurate clinical investigation of the effects of iron therapy are: (1) the careful selection of suitable cases with regard to their type and etiology and the absence of complications and (2) the establishment of adequate control periods. An arbitrary test is described in which the hematopoietic response to iron may be judged quantitatively, and the adequacy of the dosage of iron determined. The percentage of utilization of orally administered iron, as determined by the total amount of iron gained in the circulating hemoglobin, varies inversely with the size of the

dosage. It is possible, during the period of rapid gain of hemoglobin, when iron dosage orally is low, to have as much as 50 per cent of utilization. The average percentage of utilization of iron in the eighty-four cases during the entire period of recovery was 3.4. The percentage utilization of iron in idiopathic hypochromic anemia is less than in uncomplicated hypochromic anemia due to a chronic loss of blood. Patients with idiopathic hypochromic anemia usually require a continuation of iron therapy indefinitely. The maintenance dose of iron in these cases is usually smaller than the dose required for maximum blood regeneration in the period of recovery, but varies with individual cases. Toxic symptoms following the oral administration of iron and ammonium citrate not infrequently occur, but the maximum amount of iron administered orally in this form that is eventually tolerated by the patient is, as a rule large (from 1 to 2 Gm. daily). It has been felt that the influence that the addition of copper to iron may have in the treatment of hypochromic anemia in adults is at the most a minor one, and that it is advisable to give copper salts as a routine measure in hypochromic anemia in adults. To be certain of giving adequate amounts of iron in hypochromic anemia, it is necessary to give large doses, such as 6 Gm. of iron and ammonium citrate daily, corresponding to 1 Gm. of metallic iron. It was also found that ferrous salts can be equally effective in somewhat smaller doses.

Oral Administration of Iron in Hypochromic Anemia: Heath, Clark W.: Archives of Internal Medicine. 51:459-483, March, 1933.

DIGESTION OF PROTEIN

Hines in studying the digestion of protein in 2 patients with gastric anacidity, the fecal nitrogen was determined. No significant change or deviation from normal was found after high- and low-nitrogen diets of equal bulk. It was therefore concluded that in such patients the digestion of protein may be normally complete. As an index of the rate of protein digestion in patients with gastric anacidity the rate of urea excretion in the urine was determined after the ingestion of a single meal high in protein. In three patients whose meal consisted of ground

beefsteak, normal rates of urea were found. In 2 patients who swallowed the beefsteak in pieces without chewing, diarrhea developed with a large loss of nitrogen in the stools. The author concludes that in the absence of diarrhea, the digestion of protein in patients with gastric anacidity may be normally rapid. The final conclusion reached is the fact that persons with gastric anacidity may be well nourished over long periods.

The Digestion of Protein by Patients with Gastric Anacidity: Hines, Don Carlos, *The American Journal of the Medical Sciences*: 185:684-695, May, 1933.

MENOPAUSAL EPILEPSY

Schaefer and Brosius report an interesting case of menopausal epilepsy mainly because of its response to specific endocrine therapy. The case is presented in which attacks with the clinical appearance of true epilepsy appeared six months after cessation of menstruation at the age of forty-eight. Gland extracts were used for five years without relief. Theelin, 2 cc. intramuscularly was given two or three times a week. The patient had had an average of two injections weekly during the past six months and there had been no seizures. It is felt that Theelin has completely relieved the attacks.

Menopausal Epilepsy: Report of a case: Schaefer, Robert L., and Brosius, William L.: *Endocrinology*. 17:133-135, March-April, 1933.

A NEW THERAPY OF PEPTIC ULCER

Winkelstein studied a group of 42 patients in 22 months with the new "drip method" for peptic ulcer. He discusses the role of the acid factor in the pathogenesis and therapy of peptic ulcer and its importance stressed. Some basic studies in gastric secretion are presented, illustrating the role of the nervous system (vagus nerve) and the acidity curves during the night. Because of these facts, the new method of ulcer therapy consisting in a continuous drip, 24 hours daily, of alkalized milk into the stomach is advocated on the basis of the results obtained in the cases studied and treated in this way. The author feels that this is a logical and practical method of producing constant achlorhydria, that

the habit of secreting less acid (by lessening psychic secretion during the day and fasting secretion during the night) will be instituted in the patient, and that it affords a simple method of ideal self-treatment of the ulcer patient without stopping his daily activities.

A New Therapy of Peptic Ulcer: Continuous Alkalized Milk Drip into the Stomach: Winkelstein, Asher: *The American Journal of the Medical Sciences*. 185:695-704, May, 1933.

PYEMIA FOLLOWING ACUTE TONSILLAR INFECTIONS

Four cases of pyemia following acute tonsillitis are recorded. Two cases in which death occurred showed a swelling over the parotid region and at autopsy both showed multiple abscesses of the lungs. The second case showed also a thrombus in the lateral sinus. A third case had a complicating chronic otitis media on the right and extensive jugular thrombosis on the left. The fourth case recovered. German literature on this subject is abundant but there is no agreement as to the management of cases; exposure of the structures of the neck, ligation or resection of the jugular and facial veins, draining the abscess, opening the mastoid process, are all suggested procedures.

Pyemia following acute tonsillar infections probably occurs in from 1 to 2 per cent of such cases; chills, with swelling along the anterior part of the sternocleidomastoid muscle or over the parotid region may be the first symptoms. Diagnosis established, the author recommends immediate exploration of the neck. Two different views as to the method of infection of the blood stream are outlined: (1) suppurating gland or parapharyngeal abscess close to jugular vein, (2) infection by small tonsillar veins through thrombophlebotic process. Anaerobic streptococcus is the organism most frequently found and blood cultures are positive in 50 per cent of the cases. There is a difference of opinion as to whether the tonsils should be removed at the time of operation and there is no agreement as to the management of these cases.

Pyemia Following Acute Tonsillar Infections. Rubin, Herman. *Archives of Otolaryngology* 17:183-196. February, 1933.

KANSAS MEDICAL SOCIETY**Proceedings of the Seventy-Fifth Annual Meetings (Concluded)**

MEETING OF HOUSE OF DELEGATES

Thursday, May 4, 1933

The House of delegates met in the private dining room of the cafeteria, Memorial Union Building, Thursday, May 4. The meeting was called to order by the President, Dr. J. D. Colt, Sr., at 8:20 a. m. The roll was called and there were 51 votes present including delegates, officers and councilors.

The first order of business was the election of officers. The following were elected:

President-elect, Dr. W. F. Bowen, Topeka.

Vice-president, Dr. H. L. Chambers, Lawrence.

Treasurer, Dr. Geo. M. Gray, Kansas City.

Delegate to American Medical Association: Term 2 years, Dr. J. D. Colt, Sr., Manhattan.

Councilors: First District, Dr. R. T. Nichols, Hiawatha; Second District, Dr. L. F. Barney, Kansas City; Seventh District, Dr. C. C. Stillman, Morganville; Eighth District, Dr. Alfred O'Donnell, Ellsworth.

STANDING OF COUNCIL

District	Councilor	Term Expires
1st—	Dr. R. T. Nichols, Hiawatha.....	1936
2nd—	Dr. L. F. Barney, Kansas City.....	1936
3rd—	Dr. E. C. Duncan, Fredonia.....	1934
4th—	Dr. O. P. Davis, Topeka.....	1935
5th—	Dr. J. T. Axtell, Newton.....	1935
6th—	Dr. H. N. Tihen, Wichita.....	1934
7th—	Dr. C. C. Stillman, Morganville.....	1936
8th—	Dr. Alfred O'Donnell, Ellsworth.....	1936
9th—	Dr. H. O. Hardesty, Jennings.....	1935
10th—	Dr. I. B. Parker, Hill City.....	1934
11th—	Dr. C. H. Ewing, Larned.....	1935
12th—	Dr. W. F. Fee, Meade.....	1934

UNFINISHED BUSINESS

The following motion of Dr. Tihen's which was made at the House of Delegates meeting on Thursday was brought up for action.

That the House of Delegates instruct the Council of the Kansas Medical Society to employ a full-time lay executive secretary with offices in Topeka. This is to be accomplished by a rebudgeting of our finances and without an increase in our dues.

After some discussion Dr. Davis offered the following amendment to Dr. Tihen's motion which was seconded and carried: That instead of submitting it to the Council for a rebudgeting of our finances that the matter of full-time lay executive secretary be submitted to the membership by referendum and that in submitting it both sides are to be represented without prejudice in drawing up the referendum and that the referendum be mailed out by the office of the secretary and submitted in time for action by the next annual meeting.

Dr. Tihen's motion with Dr. Davis' amendment was voted upon and lost.

Then Dr. Tihen submitted the following motion which was regularly seconded and carried. That the President appoint a committee to represent both sides of the question of full-time lay executive secretary and that a circular letter presenting both sides of the question be made out. And that said letter be mailed to each member of the Kansas Medical Society with a request that they study it carefully and obtain information from other state societies, the American Medical Association and other sources available. After studying the matter, they take it up with their local county medical society and be ready next year to instruct their delegates how to vote.

A motion was made that a committee be appointed by Dr. Gsell to review Dr. Colt's paper and make recommendations. The following committee was appointed: Dr. H. O. Hardesty, Dr. Alfred O'Donnell, and Dr. E. C. Duncan.

REPORT OF BUREAU OF PUBLIC RELATIONS

Financial Statement

Receipts and disbursements from May 1, 1932, to May 1, 1933.

Receipts

Sales and subscriptions	\$1,182.75
Kansas Medical Society	2,000.00
Advertising	463.00
Miscellaneous	5.67

Receipts	\$3,651.42
Balance on hand 5-1-32	80.10

\$3,731.52

Accounts Receivable	139.07
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\$3,870.59

Deficit as of 5-1-33.....	255.79
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\$4,126.38

Expenditures	
Printing "Folks"	\$2,076.80
Stock and stationery	201.80
Salaries and wages	1,139.30
Postage	170.01
Office rent	150.00
Electrotypes	135.72
Drayage	2.50
Delivering "Folks" in Topeka	65.16
Stencils and ink	72.40
Stencil cabinet	42.50
Office supplies and miscellaneous	18.19
	<hr/>
	\$4,074.38
Accounts payable	52.00
	<hr/>
	\$4,126.38

At a called meeting of the Executive Committee held in the office of the Journal of the Kansas Medical Society, February 28, 1933, publication of Folks was suspended with the March number, subject to final action by the House of Delegates at the annual meeting. Financial statement of this publication is attached. After accounts receivable are collected our records show a deficit of \$255.79.

Since the discontinuance of this publication we have received numerous subscriptions through the mails, two from Farm Bureaus in the State. Questions have been received and requests for back numbers from Ohio, Illinois and our own state. We complied with these requests and forwarded the numbers we could spare from our files.

Mead Johnson & Company, who so faithfully advertised in this publication, wrote us as follows under date of March 14:

"We are sorry to learn from your letter of the 10th of the discontinuation of Folks as we have been following with a great deal of interest the good work you have been doing through this medium.

"When you are ready to resume its publication we hope you will not overlook getting in touch with us again."

Likewise the Alexander Brothers Baking Company of Topeka asked us to get in touch with them if we should resume publication of Folks, stating they would again advertise in its pages.

Another very interesting letter was received from Mr. Allbaugh of the Garden City Daily Telegram, which we quote:

"Much to our regret we note you are going to suspend publication of Folks magazine. For several months we have

been running a county medical directory and we always use some article out of the magazine in connection with the Directory. This lends an educational value to the section.

"This directory runs once a week and we are wondering if you would be able to send us materials for it. We would appreciate any help you would give us."

Since the Bureau has a complete file of all articles written for newspapers, prior to the publication of Folks, these have been forwarded to Mr. Allbaugh and in his reply he states "They will fill the bill nicely."

It is very evident people are becoming acquainted with the Bureau of Public Relations office from the numerous inquiries and requests we have had recently for information on Sanatorium, clinics, doctors, etc. This information has been supplied through the courtesy and co-operation of the A.M.A.

EARLE G. BROWN, M.D.

Executive Secretary.

On motion, which was regularly seconded and carried, the report was accepted and placed on file.

A motion was made by Dr. Gray, regularly seconded and carried, that the publication of Folks for the coming year be suspended.

REPORT OF JOURNAL OF KANSAS MEDICAL SOCIETY

Financial Statement

Receipts and disbursements by the Editor from May 1, 1932, to May 1, 1933.

Receipts

Journal advertising	\$3,364.46
Sales and subscriptions	98.76
Kansas Medical Society	3,525.00
Other sources (electros)	89.29

Receipts	\$7,077.51
Balance on hand 5-1-32	5.73

	<hr/>
	\$7,083.24
Accounts receivable	799.90
	<hr/>
	\$7,883.14

Expenditures

Journal printing	\$2,020.90
Stock and stationery	611.52
Salaries and wages	3,149.00
Postage	144.30
Electrotypes	183.35
Office rent	150.00
Drayage	6.50
Telephone and wires	75.20

Office equipment (typewriter and adding machine)	126.50
Insurance	4.74
Delivering Journals in Topeka	16.16
Supplement to A.M.A. Directory	5.00
Office supplies and miscellaneous items.....	14.43
	<hr/>
	\$6,509.50
Accounts payable	990.12
	<hr/>
	\$7,499.72
Balance as of 5-1-33	383.42
	<hr/>
	\$7,883.14

The Journal of the Kansas Medical Society, like other publications, has had a hard struggle the past year. We have had to ask financial assistance from the society, which is an unnatural condition for this publication. In the years 1928, 1929 and 1930, the Journal remitted to the society cash in the sum of \$2,250.06. The past year we have been forced to ask for some of this money. Our normal receipts are \$1,012.19 less than in 1932. In other words our advertising sales and subscriptions, are \$1,099.00 less, receipts from other sources \$76.81 more. If the Journal is credited with the amount of \$2.00 per paid-up member for 1932, or \$2,750.00, (1,375 members at \$2.00 per member) our actual deficit as of May 1, 1933, would be \$391.58, which is much better than one would have anticipated. This deficit, \$391.58, plus our balance \$383.32, as shown on our statement, is the additional financial assistance, over and above the amount of \$2,750.00 we received from the society to operate the Journal the past year.

A comparative statement for the years 1932-1933 would show our largest increase in expenditures under the salary item. This is due to the fact Miss Carlson's salary has been prorated between the Journal and the Bureau accounts and the majority of her salary the past year has been charged against the Journal account. She has received no increase in salary. Other office assistance was discharged immediately after the meeting of the Executive Committee of the Council, February 28, 1933, at which time Folks was discontinued, and Miss Carlson now devotes her entire time to the Journal work. Her total salary will be, from now on, charged against the Journal account. Our electrotype item is more, but eventually this is paid by the

authors, which increases our receipts from "other sources." Since the new ruling this item has amounted to \$114.12 and is paid with the exception of \$25.12. Office equipment and supplies are more. We purchased a rebuilt typewriter and adding machine last year, but will endeavor to dispose of the typewriter and also a stencil cabinet, which cost \$42.50. Our printing, stock and stationery items are \$740.38 less, office rent \$75.00 less, postage \$9.47 less. It is possible for us to make further reductions in the cost of the Journal by using less expensive cover paper and by reducing the number of pages, provided this is the wish of the Council.

We lost our 100 Tuberculosis Association subscribers—an item of \$200.00. By correspondence in this office we secured renewals for about ten of these.

As you know, the life of any publication is advertising. We have been more or less discouraged in our efforts to secure new accounts. However, the prospect for additional advertising is a little more encouraging at the present time. We are glad to report J. B. Lippincott Company, Publishers, have contracted to use one page, three times, every other month, beginning with the May number. The Cooperative Medical Advertising Bureau has informed us we are to receive an order for six two page spreads of Camel Cigarettes advertising. This was to begin with the May number, but due to the fact the copy was not approved we will have to wait further instructions from them. Lancaster Optical Company, who previously informed us they were discontinuing their advertisement in our Journal have informed us they will continue with regular space.

There are only two state Journals who are not using the Cooperative Medical Advertising Bureau service. Mr. Mattson writes: "Notwithstanding that 50 per cent of their advertising is of patent medicine variety, which this Bureau would not take for you, each of these Journals reports a loss of from \$5,000 to \$8,000 last year. In fact efforts are being made by officials of both these states to clean up the pages of their Journals and have the Bureau represent them so

as to have a trustworthy Journal; and also to see if they can make advertising pay. So these two Journals do not seem to have been able to make advertising pay, even when they subordinated an ethical policy for a financial one."

It would appear from this and other reports, the Journal of the Kansas Medical Society is in as good condition, possibly better, than the average state Journal.

If the members of the society over the state will cooperate with us in securing local advertising to carry us through the next three or four months, there is good reason to believe the autumn months will show an increase.

EARLE G. BROWN, M.D., Editor.

A motion was regularly made, seconded and carried that the report be accepted and placed on file.

Dr. Gray made a motion which was regularly seconded and carried, that the secretary and treasurer be authorized to issue warrants to take care of any deficit that may occur in the publication of the Journal and that the amount of the deficit of "Folks" as given by the Editor, \$255.79, be now paid.

NEW BUSINESS

A motion was made by Dr. O. P. Davis regularly seconded and carried that the Kansas Medical Society send greetings to the Missouri State Medical Association now in session in Kansas City, Missouri, wishing them a successful meeting.

A motion was made by Dr. L. F. Barney regularly seconded and carried, that sometime when it is convenient and the Missouri State Medical Association met in the western part of Missouri on the same day the Kansas Medical Society met in the eastern part of Kansas that the two societies hold a joint meeting for at least one day in Kansas City.

The following communication was read from Dr. Sisson: "It is the desire of the Kansas members of the American Academy of Pediatrics to receive the sanction of the Kansas Medical Society to promote child health in the state by means of furthering closer contact with the general practitioners of the state, county societies and other public organizations

throughout the state by promoting clinics, lectures and round table discussions in a strictly ethical manner—in such a way as to increase the interest of such work, directly from those that are trained and prepared and willing to further such an important phase of medical practice."

EUGENE P. SISSON, M.D.

No definite action was taken.

A motion was made by Dr. Tihen that we extend a hearty vote of thanks to those who have worked to make this meeting a success, especially Douglas County Medical Society for their wonderful hospitality and that the secretary be instructed to write such a letter to the Douglas County Medical Society.

On motion the meeting was adjourned.

JOINT MEETING OF COUNTY SECRETARIES AND COUNCILORS

On Tuesday, May 2, the county secretaries and councilors assembled for their Eighth Annual Joint Meeting in the private dining room of the Union Memorial Building.

The following were present: Dr. Lyle S. Powell, Lawrence; Dr. H. E. Haskins, Kingman; Dr. L. O. Nordstrom, Salina; Dr. Earle G. Brown, Topeka; Dr. D. E. Bronson, Olathe; Dr. Leon Matassarini, Leavenworth; Dr. Geo. F. Davis, Ottawa; Dr. S. J. Schwaup, Osborne; Dr. Charles T. Moran, Arkansas City; Dr. O. W. Davidson, Kansas City; Dr. H. E. Marshall, Wichita; Mr. Mac F. Cahal, Wichita; Dr. R. T. Nichols, Hiawatha; Dr. C. C. Stillman, Morganville; Dr. E. C. Duncan, Fredonia; Dr. I. B. Parker, Hill City; Dr. O. P. Davis, Topeka; Dr. H. O. Hardesty, Jennings; Dr. J. T. Axtell, Newton; Dr. C. H. Ewing, Larned; Dr. J. D. Colt, Sr., Manhattan; Dr. Geo. M. Gray, Kansas City, and Dr. J. F. Hassig, Kansas City.

The following secretaries: Dr. Lyle S. Powell, Mr. Mac F. Cahal, Dr. O. W. Davidson, Dr. Earle G. Brown, Dr. E. C. Duncan, and Dr. Leon Matassarini made short talks dealing with the affairs and problems of their local societies and also those problems which effect the entire profession. The talks were both interesting and constructive.

Dr. O. P. Davis, Councilor for the Fourth District, moved that a meeting of this character be held again next year. The motion was regularly seconded and carried.

Meeting adjourned on motion.

COUNCIL MEETING

The new Council met and organized May 4 at 11:00 a. m. in the private dining room, cafeteria, Memorial Union Building. The meeting was called to order by the president, Dr. J. D. Colt, Sr.

An invitation was extended to the Kansas Medical Society to hold its 1934 meeting in Wichita and on motion by Dr. Duncan, regularly seconded and carried the invitation was accepted.

A motion was made by Dr. Gray regularly seconded and carried that the meeting be a three day session and that the dates be fixed for Wednesday, Thursday and Friday, May 9, 10 and 11, 1934.

A motion was made by Dr. Davis regularly seconded and carried, that the local committee at Wichita submit at the mid-winter meeting of the Council any changes or suggestions they might have to offer in reference to the scientific program of the annual meeting.

Dr. Bumgartner appeared before the meeting in reference to a committee for the good of science and the matter was referred to the Committee on Public Policy and Legislation.

DEFENSE BOARD

Dr. C. C. Stillman, Morganville

Dr. O. P. Davis, Topeka

Dr. W. F. Fee, Meade

The secretary presented a statement covering his salary for the past year and expense since January 17.

SECRETARY'S EXPENSE ACCOUNT

January 17 to May 1, 1933

SUMMARY

Stenographer's salary	\$ 300.00
Stamps	85.90
Long distance phone calls and telegrams.....	14.33
Miscellaneous	3.65
Secretary's salary for past year	
5-1-32 to 5-1-33	1,000.00
	\$1,403.88

A motion was made by Dr. Davis regularly seconded and carried, that this amount be paid.

Meeting adjourned.

SCIENTIFIC SESSION

The scientific session convened at 9:30 a. m. in the Ball Room of the Memorial Union Building on May 2 to listen to the previously announced subjects and discussions as presented by members of the society and their honored guests.

We consider the meeting a success from every standpoint. The program was splendid, the sessions were all well attended, and the registration was unusually large. The scientific exhibits were very interesting and instructive; the commercial exhibits were good and the exhibitors were enthusiastic about the convenient location of their booths and the attention shown them by attending physicians.

The local committee is to be congratulated for the efficient manner in which all arrangements were made and carried out. The entertainment was excellent and enjoyed by all. Many complimentary remarks have been heard and we believe we voice the sentiment of the Kansas Medical Society at large when we say we hope Douglas County Medical Society will invite us to Lawrence again in the near future.

J. F. HASSIG, M.D., Secretary.

— R —

The Physician's Library

(Continued from Page 314)

Bronchiectasis.

In this clinic Dr. Charles R. Austrian emphasizes the necessity of early diagnosis of bronchiectasis, showing by case histories how much more can be done for the patient if an early diagnosis is made. In treatment he takes up removal of the foci of infection, drainage of pockets, artificial pneumothorax, paralysis of the phrenic nerve and extrapleural thoracoplasty. This is a very interesting and instructive clinic and well worth anyone's time to read.

The Significance of Epileptiform Seizures Originating in Adult Life—Dr. Ernest S. Cross.

The author discusses the nature of the epileptic fit, the incidences of idiopathic and symptomatic types in adult life, and with case histories, shows there is

usually some form of organic brain pathology in most cases of epilepsy in adult life.—C.K.S.

SURGICAL ANATOMY, by C. Latimer Callander, A.B., M.D., F.A.C.S., Assistant Clinical Professor of Surgery and Topographic Anatomy, University of California Medical School; Associate Visiting Surgeon to the San Francisco Hospital. With a Foreword by Dean Lewis, M.D., Sc.D., LL.D., F.A.C.S. 1115 pages with 1280 illustrations, some in colors. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, \$12.50 net.

This one volume 1000 page work containing over 1200 illustrations, many of which are original and all of them well selected. The author's method is to cover the anatomy of the region first and then to discuss its surgical applications. The common operations are then given in detail so the reader feels that he has correlated the anatomy of a region with the surgical approach to its pathology in a highly satisfactory manner.—W.M.M.

A TEXT-BOOK OF NEUROPATHOLOGY, by Arthur Weil, M.D., Associate Professor of Neuropathology, Northwestern University Medical School. Lea & Febiger, Philadelphia, 1933. Price \$5.00.

As forbidding and difficult a subject as neuropathology is made intelligible and useful to the average medical man by this writer. His lively and scholarly interest in every diagnostic aid besides the microscope and his critical approach to a subject which still holds a number of unproven theories, makes the book sound like a fresh monograph. Although entirely adequate for the expert pathologist the book solves the clinician's problems in neurology by emphasizing the intimacy of the physiology of the nervous system with that of general physiology, and pathology. The illustrations are particularly good because they are photomicrographs rather than drawings and diagrams.—H.M.B.

DIETETICS FOR THE CLINICIAN, by Milton Arlanden Bridges, B.S., M.D., Associate in Medicine at the New York Post-Graduate Medical School, Columbia University, New York, in collaboration with Ruth Lothrop Gallup, Dietitian. Lea & Febiger, Philadelphia, 1933. Octavo, 666 pages. Price \$6.50.

This book was written by a series of authors, mostly New Yorkers, covering in an alphabetized form the various diseases and their diets. It includes a section on digestion, on vitamins, and on foods. Quite a little of it is written by a dietitian covering the field of foods,

recipes, food tables and the like. It is very helpfully written because of its arrangement and for the most part its content is excellent. The fields of Bright's disease, diabetes mellitus and pyelitis, as well as the dietetic management of diseases of children and infant feeding, are covered extensively.

In a few instances the book is inadequate, as illustrated by the description of the Ketogenic diet in epilepsy. Its bibliography is arranged at the back of the book and is too generalized to be of as much help as it might have been in sections. For the general practitioner, however, it fits the need probably more adequately than any other recent book on dietetics.—W.C.M.

MEDICAL STATE BOARD EXAMINATIONS: Topical Summaries and Answers, by Harold Rypins, M.D., Secretary, New York State Board of Medical Examiners. J. B. Lippincott Company, Philadelphia, 1933. Price \$4.50.

Several advantages pertain to this up-to-date volume of less than 500 pages, since it is not a mere bundle of questions and answers as is the time-honored "Goepp." The information is arranged according to topics which are adequately indexed at the back. At the end of each chapter is the list of questions for review. Repetition of details is avoided. The usual long chapter on prescription writing and pharmacology is missing, while therapy is sprinkled throughout the clinical descriptions. There are numerous tables and outline charts.

The author's preface advises the frightened candidate that he is being examined not by hard task-masters, but by practical men who want to know his minimum of knowledge. He urges a week-end of diversion instead of cramming beforehand. This short preface is as valuable for the candidate as the whole compendium is useful for the licentiate who afterwards wants a good desk reference.—H.M.B.

SURGICAL CLINICS OF NORTH AMERICA. (Issued serially one number every other month.) Volume 12, Number 2. (New York Number—April, 1933) 274 pages with 56 illustrations. Per Clinic Year (February, 1933, to December, 1933). Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

In this New York number, Dr. Howard Lilienthal, in his most interesting manner, presents an operative case of osteo-

myelitis of the rib simulating a tumor. Dr. Edwin Beer brings out many valuable points in his discussion on diagnosis and treatment of bladder tumors. Dr. Robert T. Frank in his clinic illustrates different phases of gynecology with especial reference as to "what to do and when to do it," also emphasizing the value of biopsy. Dr. John M. Hanford from a study of 800 cases of tuberculous lymph nodes in the neck, that he has seen personally, advises radical excision in the early stages as the treatment of choice. Dr. R. E. Stetson in his discussion of post transfusion reactions divides them into hemolytic and proteolytic and gives a number of case histories illustrating each type and offers important suggestions to aid in eliminating these reactions.

Quite a variety of malignant cases are discussed by different staff members from Memorial Hospital. The value of proper irradiation both *x*-ray and radium are demonstrated in these cases and their results in a number of the inoperable cases are most gratifying.

This entire number including many other clinics is extremely interesting and instructive.—M.B.M.

DISEASES OF THE HEART. Described for practitioners and students. By Sir Thomas Lewis, C.B.E., F.R.S., M.D., D. Sc., LL.D., F.R.C.P., Hon. D.Sc. (Michigan) Physician in charge of Department of Clinical Research, University College Hospital, London; physician of the staff of the Medical Research Council; physician in chief (pro tem) Peter Bent Brigham Hospital, Boston; Honorary Fellow New York Academy of Medicine; corresponding member Association of American Physicians and Interstate Postgraduate Medical Association. The MacMillan Company, New York—London. Price \$3.50.

In this book the author has stressed simplicity. Of course, it has been necessary to use some electro-cardiographs but as he has said in his preface "I have tried to strip my subject of intricacies and redundances, of unnecessary technical terms, named signs, and the old trite phrases, for these begin to stifle Medicine." If nothing else was said of this book, this alone would be enough to make one want it in his library, but to go on and read the book one wonders why it had not been written long before. He emphasizes the diagnosis but really gives a great deal of space in his book to treatment. It is a book one would refer to

every day in his general practice.—C.K.S.

DISEASES OF TRADESMEN, by Bernardino Ramazzini (1633-1714) together with biographical notes translated from the French of Francois Claude Mayer (1928) of Budapest, and paragraphs from the preface of Dr. James (1746) of London, and of Dr. James (1922) of New York. The abstracts from the 1746 English translation of the Ramazzini work emphasize his comments on dermatological disturbances of workmen. Compiled by Herman Goodman, B.S., M.D., New York City, with which is bound **SILK HANDLERS' DISEASE OF THE SKIN**, being a study of the clinical aspects, and a recital of the search for the cause including notes on the culture of the silkworm, the handling of the silk from the cocoon to its preparation in the throwing mill for weaving, by Herman Goodman, B.S., M.D., New York City. Medical Lay Press, New York City. Price \$1.50.

While Dr. Goodman was doing reference reading in regard to skin diseases of silk handlers, he came across several translations of Bernardino Ramazzini's book "De Morbis Artificum Diatribe," written in 1700. The insight and keen observations of this old master so impressed Dr. Goodman that he wisely reckoned his contemporaries would enjoy abstracts from the chapters of this old book. The second part is a very thorough discussion of skin diseases of employees of a silk throwing mill, and also of the various methods employed in this type of work. This small book is highly recommended for an evening of entertaining reading and enlightenment.—E.H.D.

—R—

Sirian Ultraviolet Lamp Not Acceptable.—The Council on Physical Therapy reports that the Sirian Ultraviolet Lamp, sold by the Arcturus Radio Tube Company in Newark, N. J., resembles an ordinary incandescent lamp having a tungsten filament enclosed in a glass bulb that transmits the ultraviolet radiations of wave lengths longer than 2,800 angstroms. The lamp is made in four sizes, 60 watts, 100 watts, 150 and 300 watts. The measurements on the 150 watt lamp reveal a little ultraviolet radiation of wave lengths between 3,130 and 3,340 angstroms not generally considered useful for therapeutic purposes. The ultraviolet radiation intensities available appear to be only from one fiftieth to one one hundredth of the requirements of the Council on Physical Therapy. In the small pamphlet called "Sirian Ultraviolet Light 'A Little Sun in Each Lamp,'" there appear certain objectionable phrases as "healthful tonic," "health-giving energy," and "builds up resistance to disease." The Council on Physical Therapy declared the Sirian Ultraviolet Lamp ineligible for inclusion in its list of acceptable devices because: (first) the intensity of ultraviolet energy is too low to meet the minimum specifications of "Ultraviolet Radiation Useful for Therapeutic Purposes—Specification of Minimum Intensity or Radiant Flux: Second Communication" (The Journal, July 9, 1932, p. 125); and (second) the aforementioned health claims recorded in the concern's advertising matter and descriptive literature are unwarranted. (Jour. A.M.A., February 4, 1933, p. 338.)

List of Physicians Licensed by the Kansas State Board of Medical Registration and Examination, June 20-21, 1933

BY EXAMINATION

NAME	SCHOOL	DATE OF GRADUATION	ADDRESS
Armstrong, Carroll W.	Creighton University	1933	Salina, Kan.
Bales, Eugene LeRoy	University of Kansas	1933	Lawrence, Kan.
Basham, Francis C.	Washington University	1933	Wichita, Kan.
Beal, Lynn E.	University of Kansas	1933	Fredonia, Kan.
Beebe, Elmer	University of Wisconsin	1932	Olathe, Kan.
Bierlein, Kenneth J.	Northwestern University	1933	Arma, Kan.
Brasher, Ben H.	University of Kansas	1933	Orrick, Mo.
Bullock, Harold O.	University of Kansas	1933	Kansas City, Kan.
Burger, Raymond A.	University of Kansas	1933	Wichita, Kan.
Burnett, Jesse McS.	Meharry Medical College	1933	St. Louis, Mo.
Burnett, William C.	Meharry Medical College	1933	St. Louis, Mo.
Chastian, Maurice W.	University of Kansas	1933	Kansas City, Mo.
Clark, John C.	University of Kansas	1933	Long Branch, N. J.
Cloyle, Arthur P.	University of Kansas	1933	Kansas City, Mo.
Collins, Robert F.	University of Kansas	1933	Leavenworth, Kan.
Cooper, William W.	Northwestern University	1933	Reading, Kan.
Curran, Kerwin E.	University of Kansas	1933	Kansas City, Mo.
Dale, Margaret L.	University of Kansas	1933	New York, N. Y.
Edwards, James F.	University of Kansas	1933	Lawrence, Kan.
Elnen, Walter T.	Loyola University	1933	Wichita, Kan.
Erickson, Clarence W.	University of Kansas	1933	Kansas City, Kan.
Esau, Anne G.	University of Kansas	1933	Berwyn, Ill.
Flanders, Horace F.	University of Kansas	1933	Kansas City, Kan.
Garnett, William G.	University of Kansas	1933	Los Angeles, Calif.
Garrison, Everett J.	University of Nebraska	1933	Kansas City, Kan.
Grosddier, Edward J.	University of Kansas	1933	Kansas City, Kan.
Haage, Delbert O.	University of Kansas	1933	Kansas City, Mo.
Harless, Morris S.	University of Kansas	1933	Kansas City, Kan.
Hatton, Lloyd W.	University of Kansas	1933	Halstead, Kan.
Herrman, George V.	University of Kansas	1933	Kansas City, Kan.
Hinshaw, Alfred H.	University of Kansas	1933	Kansas City, Kan.
Hyde, Marshall E.	University of Kansas	1933	Kansas City, Kan.
Jeffries, Robert C.	University of Kansas	1933	Kansas City, Mo.
Jones, Hiram P.	Harvard University	1931	Lawrence, Kan.
Leichter, Martin	University of Kansas	1933	Kansas City, Mo.
McClintock, Edward A.	University of Kansas	1933	Kansas City, Mo.
McCurdy, Robert A.	University of Kansas	1933	Cleveland, Ohio
McKnight, Ellis B.	University of Kansas	1933	Esbridge, Kan.
Melton, Ralph R.	University of Kansas	1933	Halstead, Kan.
Miller, Herbert H.	Nebraska Medical College	1931	Concordia, Kan.
Need, Jr., Omar U.	University of Kansas	1933	Oakhill, Kan.
Needles, Orval T.	University of Kansas	1933	Kansas City, Mo.
Neighbor, Ernest G.	University of Kansas	1933	Kansas City, Mo.
Parker, David F.	University of Kansas	1933	Hill City, Kan.
Pearse, Jr., Roy W.	University of Kansas	1933	Kansas City, Mo.
Proctor, Lawrence A.	University of Kansas	1933	Parsons, Kan.
Ratzlaff, Abraham K.	University of Kansas	1933	Hillsboro, Kan.
Rich, William T.	St. Louis University	1932	St. Louis, Mo.
Robinson, George G.	University of Kansas	1933	Kansas City, Mo.
Rossitto, Anthony F.	Creighton University	1933	Wichita, Kan.
Scheer, George E.	University of Kansas	1933	Kansas City, Kan.
Scheetz, Marion R.	Ohio State University	1933	Coshocton, Ohio
Schuhmacher, Lawrence F.	University of Kansas	1933	Ottawa, Kan.
Schuhmacher, Nelson R.	University of Kansas	1933	Ottawa, Kan.
Sheldon, John	University of Kansas	1933	Kansas City, Mo.
Simon, John F.	University of Kansas	1933	Kansas City, Kan.
Smith, Leslie B.	University of Kansas	1933	Kansas City, Kan.
Smith, Leo A.	Creighton University	1933	St. Louis, Mo.
Stauch, George G.	University of Kansas	1933	Kansas City, Mo.
Stofer, Bert E.	University of Kansas	1933	Wichita, Kan.
Stroff, Stanley C.	University of Kansas	1933	Trenton, Mo.
Sweet, Irwin C.	University of Nebraska	1933	Omaha, Nebr.
Tate, Wendell M.	University of Kansas	1933	Halstead, Kan.
Tom, Henry K.	Washington University	1933	Omaha, Nebr.
Trinkle, Albert J.	University of Kansas	1933	Garden City, Kan.
Wakeman, Don C.	University of Kansas	1933	Baltimore, Md.
Wilcox, Clyde W.	Temple University	1932	Omaha, Nebr.
Wilson, Donald J.	University of Kansas	1933	Kansas City, Mo.
Wyatt, Ralph M.	University of Kansas	1933	Kansas City, Mo.
Wynne, Francis E.	University of Kansas	1933	Columbus, Ohio

List of Physicians Licensed by the Kansas State Board of Medical Registration and Examination, June 20-21, 1933

BY RECIPROCITY

NAME	SCHOOL	DATE OF GRADUATION	ADDRESS
Core, Edwin R.....	Georgetown University	1929.....	Bird City, Kan.
Harrell, Roosevelt E.....	St. Louis University	1928.....	Neosho Falls, Kan.
Harrell, Roy W.....	Loyola University	1917.....	Valley Falls, Kan.
Hertzler, John W.....	State University of Iowa	1930.....	Halstead, Kan.
Humphrey, J. Hugh.....	University of Oklahoma	1932.....	Anthony, Kan.
Lafene, Benjamin W.....	Western Reserve University	1931.....	Walsburg, Kan.
McManus, Zelma R. M.....	Woman's Medical College	1926.....	Caney, Kan.
Miller, Joseph W.....	Baylor Medical College	1931.....	Peabody, Kan.
Pusitz, Manuel E.....	University of Toronto	1929.....	Topeka, Kan.
Riedel, Robert H.....	Washington University	1928.....	Osage City, Kan.
Scarborough, Herbert V.....	University of Iowa	1902.....	Lyons, Kan.
Skinner, Edward H.....	St. Louis University	1904.....	Kansas City, Mo.
Stone, Leo.....	University of Michigan	1904.....	Topeka, Kan.
Welch, Alan R.....	St. Louis University	1914.....	Halstead, Kan.
Weston, William G.....	Louisville Medical College	1928.....	Arkansas City, Kan.

DEATH NOTICES

CARTWRIGHT, EDWARD DENNIS, McPherson, aged 26, was accidentally drowned June 4, 1933. He graduated from Washington University School of Medicine, St. Louis, in 1931. He was not a member of the Society.

GRAHAM, J. DALE, Columbus, aged 59, died June 25, 1933, of blood stream infection following influenza. He graduated from University Medical College of Kansas City, Missouri, in 1904. He was a member of the Society.

HERR, FRANCIS CHRISTIAN, Ottawa, aged 80, died June 8, 1933, of carcinoma of rectum. He graduated from Jefferson Medical College of Philadelphia in 1879. He was an honorary member of the Society.

NORDSTROM, LOUIS OLIVER, Salina, aged 57, died May 28, 1933, of septicemia. He pricked his finger with needle while operating. He graduated from College of Physicians and Surgeons, Kansas City, Kansas, in 1902. He was a member of the Society.

SCOLICK, PERCY A., Kansas City, aged 44, died June 27, 1933, of coronary infarct. He graduated from University of Western Ontario Medical School, London, Canada, in 1912. He was a member of the Society.

TERRILL, JULIAN O., Wichita, aged 75, died April 28, 1933, in a hospital in Topeka, of arteriosclerosis. He graduated

from College of Physicians and Surgeons, Keokuk, Iowa, in 1882. He was not a member of the Society.

R

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka

Chairman of Publicity

Woodland Park, Colorado
Glen Rock Club,
July 22, 1933.

My dear Medical Auxiliary Members of Kansas:

May I thank you one and all for the wonderful privilege of representing you at the National Medical Auxiliary meeting at Milwaukee June 12-16? It was most inspiring and I hope we in Kansas can make a progressive showing in our work this year. We have a fine start in having a state chairman for every department advised by the National Board. They are: Organizer, Mrs. E. C. Duncan, Fredonia; Health Education, Mrs. C. D. Blake, Hays; Public Relations, Mrs. R. T. Nichols, Hiawatha; Hygeia, Mrs. Wilfred Cox, Wichita; Press and Publicity, Mrs. J. T. Hunter, Topeka, and Legislature, Mrs. Earl G. Clark, Belle Plaine.

These chairmen are ready to help each county auxiliary in their work and I hope each one will have the corresponding departments in the county work.

Beginning with September, a news letter will go to each organized county, giving plans, suggestions and national and state news. This is a new venture in our state work but one that is proving very successful in other states.

I know the county auxiliaries cannot hope to do any active work during the summer but now is the time for you to be making plans for your work in the fall. While I am resting at my cabin in Colorado I am thinking and arranging a program for the state work.

Best wishes and success to each county auxiliary in the coming winter's work.

I am most sincerely,

MRS. ELMER J. NODURFTH,
State President.

—R—

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of May 27 the following have been accepted:

Abbott Laboratories—Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 100 mg. Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 120 mg. Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 150 mg. Sterile Ampoules of Procaine Hydrochloride Crystals (Abbott) 200 mg.

Lederle Laboratories, Inc.—Refined and Concentrated Antipneumococcic Serum Type II (Lederle)

Eli Lilly & Co.; Extralin Pulvules Extralin, 0.5 gm.

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Calcium Gluconate—Merck.—A brand of calcium gluconate—N.N.R. (New and Nonofficial Remedies, 1933, p. 129). Merck & Co., Inc., Rahway, N. J.

Phenobarbital Sodium—Merck.—A brand of phenobarbital sodium—N.N.R. (New and Nonofficial Remedies, 1933, p. 96). Merck & Co., Inc., Rahway, N. J.

Capsules Lipiodol-Lafay, 0.5 Gm.—Each gelatin capsules contains lipiodol-Lafay (New and Nonofficial Remedies, 1933, p. 232), equivalent to 0.2 gm. of iodine. E. Fougera & Co., New York.

Tablets Lipiodol-Lafay.—Each tablet contains a calcium salt of the iodized fatty acids of lipiodol-Lafay (New and Nonofficial Remedies, 1933, p. 232) 0.1 gm. (equivalent to 0.04 gm. of iodine) incorporated in a base composed of sugar, acacia and cacao, and flavored with vanillin. E. Fougera & Co., New York.

Sodium Morrhuate.—The sodium salt of the unsaturated fatty acids occurring in cod liver oil. The action of sodium morrhuate is that of a sclerosing agent. It is employed in solution with addition of a local anesthetic for the obliteration of varicose veins. It is marketed in the form of Ampoules Sodium Morrhuate 5 per cent with Benzyl Alcohol 5 cc. G. D. Searle & Co., Chicago.

Ampule Glucose (U.S.P. Dextrose) Solution 20 cc. size.—A solution prepared by dissolving anhydrous dextrose (New and Nonofficial Remedies, 1933, p. 267) in the proportion of 9 gm. (equivalent to 10 gm. dextrose—U.S.P.) to 20 cc. of sterile distilled water. Lederle Laboratories, Inc., Pearl River, N. Y.

Ampule Glucose (U.S.P. Dextrose) Solution 50 cc. Size.—A solution prepared by dissolving anhydrous dextrose (New and Nonofficial Remedies, 1933, p. 267) in the proportion of 22.5 gm. (equivalent to 25 gm. dextrose—U.S.P.) to 50 cc. of sterile distilled water. Lederle Laboratories, Inc., Pearl River, N. Y.

Ampule Glucose (U.S.P. Dextrose) Solution 100 cc. Size.—A solution prepared by dissolving anhydrous dextrose in the proportion of 45 gm. (equivalent to 50 gm. dextrose—U.S.P.) to 100 cc. of sterile distilled water. Lederle Laboratories, Inc., Pearl River, N. Y. (Jour. A.M.A., June 3, 1933, p. 1766.)

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Sunrise Pancake Flour (Concordia Milling Company, Concordia, Kansas).—A self-rising pancake flour containing soft and hard wheat flours, sodium bicarbonate, calcium acid phosphate, dextrose, salt and powdered skim milk.

Betty Jane Flour (Bleached) (The Robinson Milling Company, Salina, Kan.)—Hard winter wheat patent flour; for general baking.

Winfield Supreme Brand Unsweetened Evaporated Milk (The Page Milk Company, Merrill, Wis., packer; Winfield Wholesale Grocery Company, Wichita, Winfield, Kan., distributor).—Canned, unsweetened, evaporated milk. A mixture of one part water and one part of this product corresponds to the legal

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standard for whole milk. (Jour. A.M.A., June 17, 1933, p. 1935).

Betty Jane Flour (Phosphate Added) (Bleached); Robin's Best Flour (Phosphate Added) (Bleached) (The Robinson Milling Company, Salina, Kan.)—Hard winter wheat "standard patent" flours admixed with 0.5 per cent calcium acid phosphate; for biscuit baking.

Clapp's Original Baby Soup (Harold H. Clapp, Inc., Rochester, N. Y.)—Comminuted cooked soup stock prepared from potatoes, tomatoes, carrots, unpolished rice, cabbage, celery, meat broth, whole grain barley, salt, onions and water. It is claimed to be especially intended for infants, children and convalescents and for special diets.

Accepted Devices For Physical Therapy

The following product has been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Collins Oxygen Tent.—A serviceable tent providing oxygen therapy for treatment of those cases amenable to oxygen therapy, such as pneumonia and certain cardiac diseases. The unit was investigated in a clinic acceptable to the Council. The investigation substantiated the physical and therapeutic claims and met the tentative specifications of minimum standards for oxygen tents adopted by the Council. Warren E. Collins, Inc., Boston, Mass. (Jour. A.M.A., June 10, 1933, p. 1864).

Propaganda For Reform

Acceptance of Sunlamps.—The Council on Physical Therapy reports on the stand it has taken in reference to the acceptance of sunlamps. In order that it may better understand the problems confronting the Council the attention of the profession is called to the following: A. The Council on Physical Therapy definitely withholds acceptance of the postulatory principle of dual-purpose lighting, because it is highly theoretical and the promulgators of this idea have not presented acceptable clinical evidence to the Council substantiating its therapeutic or prophylactic value. B. The Council on Physical Therapy declines to accept sunlamps if the manufacturer fails to state in all advertising matter and descriptive literature the distance between the lamp and the recipient required to equal the intensity of midday, midsummer, mid-latitude, sea level, natural sunlight. C. The manufacturers of acceptable sunlamp for home use have agreed to discontinue objectionable claims such as that exposure to ultraviolet rays increases or improves the tone of the tissues or of the body as a whole, stimulates metabolism, acts as a tonic, increases mental activity, maintains health, or tends to prevent colds, because these claims have not been conclusively substantiated by experimental evidence. D. Until further evidence is presented to prove otherwise, the Council declares that the erythema test is the only means of determining whether appreciable ultraviolet is emitted by the source. (Jour. A.M.A., June 10, 1933, p. 1863).

Diathermy.—The Council on Physical Therapy in a preliminary statement reports that diathermy is the therapeutic use of a high-frequency electric current to generate heat within some part of the body. For want of better terminology, diathermy may be di-

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THE JOURNAL OF
THE KANSAS MEDICAL SOCIETY

vided into two divisions: medical diathermy and surgical diathermy. Medical diathermy is contraindicated (1) in acute inflammatory processes such as acute nondraining cellulitis, acute arthritis characterized by infection, and acute pelvic infection; (2) in any condition in which there is a tendency to hemorrhage, such as a gastric ulcer, and (3) in those areas in which the appreciation of heat has been impaired or lost, as in certain peripheral nerve injuries. It is also contraindicated in diseases or injuries in which simpler methods of applying external heat give satisfactory results. The advantages of electro-surgery lie in effective destruction in loco of tissues that it is desirable to eliminate. This manifestly includes many forms of malignancy. (Jour. A.M.A., June 17, 1933, p. 1933).

Metapollen Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that "Metapollen," a product of Metapollen Laboratories of Carbondale, Ill., is proposed for the intranasal treatment of hay fever and associated conditions, and for a variety of disorders originating in the nasal passages. Following are examples of the claims made for this preparation: "Quickly breaks up any attack of Hay Fever at any point in the course of an attack"; "100 per cent are relieved for two years or longer"; "Any one can administer Metapollen successfully"; "Safe, Certain, Satisfactory"; "No anaphylaxis possible in any case at any time." Inquiry as to the composition of this preparation was made by the A.M.A. Chemical Laboratory. In a reply signed by E. E. Edmondson, Medical Director, it was stated that Metapollen is not a secret preparation; that its formula had been published. It was gathered from the letter that at various times Metapollen had contained "glycerite of aluminum," silver nitrate, zinc chloride, zinc sulphate and copper sulphate, in various com-

binations and proportions. It was stated further in the letter: "We have no formula we would not change without notice if we see improvement by so doing." Together with the Metapollen solutions a preparation in tablet form is used, "Compyrine," said to consist originally of 5½ grains of a mixture in unstated proportions of "dimethylamine antipyrine" (amidopyrine), caffeine, phenacetin and hyoscyamus; this, it was stated, was later changed to a 5 grain tablet of nothing but amidopyrine with no change in the name. The remainder of the treatment it is understood consists of a local anesthetic (2 per cent of cocaine "muriate") and an inhalant said to contain menthol, camphor, thymol and methyl salicylate, also in unstated proportions. The daily use on the nasal mucous membrane of highly astringent solutions, such as apparently are sold under the name Metapollen, may be fraught with serious consequences. The Council considers as particularly reprehensible advice of frequent cocaineization of the nasal passages. The Council declared Metapollen to be unacceptable for inclusion in New and Nonofficial Remedies because no satisfactory formula has been furnished by the manufacturer; no tests for identification and purity have been established; claims of special therapeutic usefulness are not warranted by the evidence; the name is objectionable (also true of "Compyrine") as it is not indicative of composition; the composition is unscientific. (Jour. A.M.A., February 18, 1933, p. 499.)

Certainly Lima Bean Flour Not Acceptable.—The Committee on Foods reports that the Beaver Valley Milling Company, Des Moines, Iowa, submitted a lima bean flour called "Certainty Lima Bean Flour" prepared from selected dried California lima beans. The label prominently states that this flour is "highly alkaline in its reaction in the system," and is "An

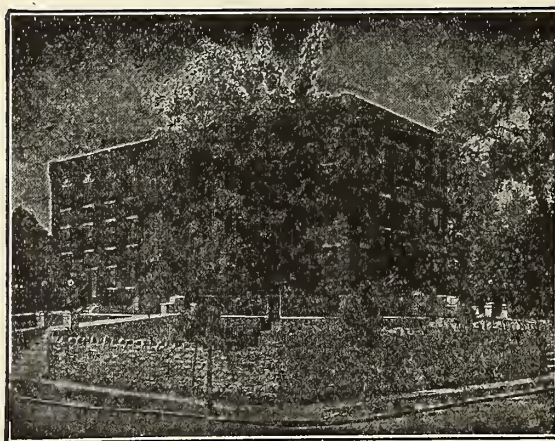
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anti-acid food product." The prominent unqualified claim "an anti-acid food" may imply to the public that the product is recommended for neutralizing stomach acidity, which it will not do. The claim that the product was "prepared at the request of physicians who desired it for . . . cases of high blood pressure, hyperacidity and some kinds of kidney troubles" is an objectionable vague reference to physicians and is deceptive in that the public is led to infer that physicians have proved the product therapeutically beneficial in the diseases mentioned, which is not the case. The discussion of diseases in lay advertising is conducive to self-medication, which conflicts with the best health interests of the public. The company was advised that the label statements for this lima bean flour as a whole are misinformative, misleading, and deceptive to the public. The company has not taken steps to correct the label but expresses itself as desiring to use "some medicinal claims . . . in selling the product." This food, therefore, is not listed among the Committee's accepted foods. (Jour. A.M.A., April 15, 1933, p. 1175.)

Sunny Boy Short Patent Family Flour (Bleached), Grandma's Loaf Fancy Patent Hard Wheat Flour (Bleached), Aetna's Best Fancy Patent Flour (Bleached), Golden Dream Fancy Patent Flour (Bleached), Larabee's Larabell Fancy Patent Flour (Bleached) and Miss Kansas Fancy Patent Flour (Bleached) Not Acceptable.—The Committee on Foods reports that the Commander Larabee Corporation submitted these flours, all of the grade recognized in the milling industry as "straight" flours; that is, flours composed of all the mill flour streams recognized as utilizable for commercial bakeries or home baking purposes. The respective flours bear such special designations as "short patent" and "fancy patent," which names are recognized as ap-

propriate only for those flours different essentially in flour mill stream composition from "straight" flour. The corporation when informed of this opinion has not indicated willingness to change the designations accompanying the trade names. These flours, therefore, are not listed among the Committee's accepted foods. (Jour. A.M.A., April 15, 1933, p. 1175.)

Calcium Peroxide—R. & H.; Oxone; Sodium Dioxide Dental—R. & H. and Sodium Peroxide—R. & H. Omitted from N.N.R.—The Council on Pharmacy and Chemistry reports that the period for which these products of the Roessler & Hasslacher Chemical Co., Inc., were accepted, expired with the close of 1930. When requested, at that time, to submit the current advertising for the products, the firm sent a booklet which makes reference to products which do not stand accepted for New and Nonofficial Remedies. The firm was informed that this constitutes a conflict with the Council's rule concerning the use of an accepted product to advertise unaccepted products. The firm made no reply at this time and failed to reply to a similar request in 1931. In view of the firm's failure to cooperate, the Council omitted Calcium Peroxide—R. & H., Oxone, Sodium Dioxide Dental—R. & H. and Sodium Peroxide—R. & H. from New and Nonofficial Remedies. (Jour. A.M.A., April 22, 1933, p. 1237.)

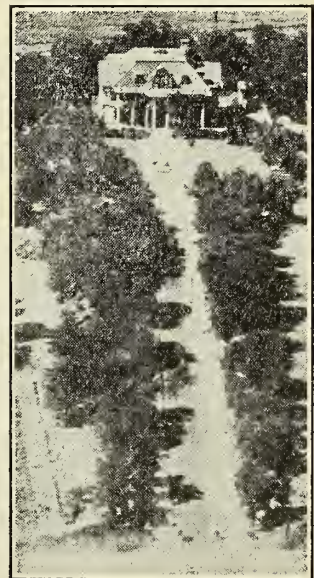
Estrogenic Substances: Theelin.—The Council on Pharmacy and Chemistry reports that the introduction into therapeutics of commercial preparations with active estrogenic properties marked what appeared to be a new phase in the treatment of female sexual disorders. These new preparations, unlike those with which the market had been replete for many years, produced striking and concordant effects when injected into animals. Their clinical use spread widely and rapidly, and observations accumu-

THE ROBINSON CLINIC

The early diagnosis of mental diseases is very important. When a friend or relative begins to show the symptoms of a mental breakdown, many people procrastinate before the doctor is consulted and, frequently the family physician belittles such symptoms as mild depression, emotionalism, paranoid ideas and occasional fits of temper. These symptoms frequently indicate that the patient is on the verge of a mental disturbance.

There are two disastrous results from delay in these cases: The patient may commit some act of violence, either to himself or his relatives. Many times, attempted suicide or homicide is the act that forces the relatives to bring the patient to the doctor for examination and advice. Occasionally, the above acts are successful. All of the sorrow might have been prevented, if the family or family physician had taken proper steps in time. Depression, irritability and fits of temper must not be disregarded; the patient must be hospitalized.

Mental diseases may also lead to loss of judgment. As a result of this, the patient may waste his money on poor investments and wanton spending. Only by appointing a guardian to protect the patient from himself, may this be avoided. This step must be taken at the first sign of a personality change.



Airplane View

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lated in profusion. But the early enthusiasm began to wane as it became evident that the therapeutic usefulness of the estrogenic preparations had been greatly overestimated; the effects of injections in human beings were in the great majority of cases neither striking nor concordant; and in those cases, too few, unfortunately, in which an effort was made to control the observations carefully, the results appeared to be even less notable. Despite their extensive employment, the indications for the clinical use of Theelin and related products are at the present time only imperfectly understood. With a view to establishing, if possible, the indications for and limitations of endocrine therapy of this type, a comprehensive review on this subject was prepared and adopted by the Council for publication. Theelin and related preparations have been used in practically all the special ills the human female "is heir to"; even the male has not escaped. The results in general have been quite disappointing, despite the abundance of case reports available, numbering by now several thousand. The place of Theelin and related products in gynecologic therapy remains for the future to decide. Great caution is necessary in the use of these preparations and greater caution in making deductions from it. The indiscriminate use is likely to do more harm than good, not only because of the effect of the preparations themselves but also because general therapeutic measures intended to aid the organism in restoring its own equilibrium are likely to be neglected. The Council believes that the future of endocrine therapy in the sexual sphere appears quite promising; but so far enthusiasm in this case has in large part seriously interfered with clinical judgment; the clinical use has kept far ahead of the lab-

oratory data; controlled observations have been few indeed. It is time to call attention to the fact that most of the basic facts should first be worked out in the laboratory before they are tried in the clinic. (Jour. A.M.A., April 29, 1933, p. 1331.)

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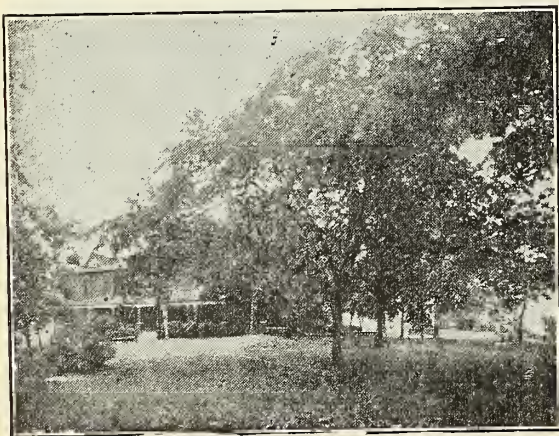
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THE JOURNAL

of the

Kansas Medical Society

Vol. XXXIV

TOPEKA, KANSAS, SEPTEMBER, 1933

No. 9

ORIGINAL ARTICLES

ACUTE HEAD INJURIES AND THEIR MANAGEMENT*

A. R. HATCHER, M.D., F.A.C.S.
Wellington, Kansas

The frequency and seriousness of head injuries in our civil life is not a little due to the progress of the machine age—that is, its products—the automobile, motorcycle and aeroplane. It is, then, because of our modern modes of transportation that the serious head injuries are so frequently called to our attention.

A quarter of a century ago the public bemoaned their drudgery and slow mode of travel. Then our engineers, chemists, scientists, and wizards of machinery came along and supposedly simplified the living and working conditions of the layman, assuring them greater comfort and pleasure; on the contrary they have made our daily life more complex, contributing to high nervous tension, mental and physical exhaustion, innumerable injuries, deformities and fatalities, a large number of which are serious head injuries.

In going through our hospital records, I found we have had under observation seventy (70) cases of such injuries during the past five years and their ever increasing number has caused me to be interested in their management.

The term, "fractured skull" no longer conveys the important features of a head injury, and I shall use a more descriptive term, cranio-cerebral injuries, which includes not only fractures of the cranium but also injuries to the brain. Far too much attention is ordinarily directed to the treatment of fractures

which is only justifiable when there is no danger to the patient's life.

In disposing of the subject of fracture in acute cranio-cerebral injuries, I will sub-divide the types into:

- (1) Linear fractures of the vault
- (2) Depressed fractures, and
- (3) Fracture of the base.

Any of these may be associated with an intracranial complication such as hemorrhage, cerebral edema, contusion, or laceration of the brain, or infection, either primary or secondary.

We should all be past the stage of giving ourselves much concern about linear fractures of the vault and the basal per se—aside from the depressed fractures. The latter demand, frequently, operative attention provided there are superficial cranial or cerebral signs or symptoms present. When we have come to realize that when a fracture is sustained in a severe head injury, the occurrence of same has produced for us a decompression, many times fortunate for the patient, thus preventing an operation for the relief of the increased intracranial pressure.

Before proceeding further in the discussion of the many complications that may ensue, let us not forget that any patient in shock must not be disturbed for any reason, except for the efforts necessary in combating the shock. *x-Ray* examinations so frequently insisted upon by relatives and friends and commonly by physicians, are of little importance in the treatment of head injuries. In doubtful depressed fractures of the vault they are at times of some help; in basal, or linear fractures of the vault, the fracture line is frequently not revealed by the roentgen ray and the treatment is the same whether or not a fracture is evident.

Why then should we rush very ill patients to the *x-ray*, moving them from stretcher to table and back again, injur-

*Read before the 75th annual meeting of the Kansas Medical Society, at Lawrence, Kansas, May 2, 3 and 4, 1933.

ing them by so doing. Some of our cases are so ill that we would be jeopardizing their only opportunity for recovery from shock and rest, and most important of all, the necessary observation they should have. I would say, then, go to the *x*-ray when your patient is out of danger. Insist on getting the patient to bed for the purpose of quietness and observation. Keep the patient on the level or you might slightly lower the head of the bed during the period of shock; apply external heat; morphine, when not contraindicated, with perhaps atropine if there is much sweating—to prevent loss of fluids. A word of caution concerning the use of morphine, as suggested by Carl Rand:

(1) In head injury of severe grade, the increased intra-cranial pressure usually causes embarrassment and depression of respiration and pulse; morphine accentuates this depressing action and often fails to quiet;

(2) Morphine contracts the pupils and thus masks the development of localizing signs, and

(3) It tends to mask the symptoms of on-coming stupor due to cerebral edema or hemorrhage. Thus, frequently, it is more advisable to resort to the use of luminal, chloral, or similar sedatives. Fifty per cent glucose solution, 40 to 60 cc. intravenous, or even blood transfusion if possible, depending on the severity of the shock, are the only measures permissible and indicated.

The symptoms of shock frequently over-shadow or even prevent the appearance of the signs of increased intracranial pressure. The most important observations are:

(1) The state of consciousness. We know that if a patient is unconscious he has intracranial pressure beyond the limit of compensation for consciousness. If the unconsciousness deepens in the next few hours, we are aware the pressure is increasing and *then* surgical intervention must be considered. If the patient's consciousness is improving cerebral pressure is being reduced. The return of consciousness is a very favorable symptom.

(2) The pulse, respiration, and temperature curves are very important and afford us much information concerning the degree of intracranial pressure. If the intracranial pressure is being compensated, the pulse, respiration, and temperature show definite characteristic changes. A slow pulse and respiration are indicative of intracranial compensation. Temperature below 101.5 to 102 is another valuable sign of the patient's safety.

It is not the heart that needs stimulation; it is the peripheral vasomotor bed which is relaxed. We need peripheral contraction in the capillaries to give resistance against which the heart may act. One of the objects throughout the entire treatment of a trauma case must be the maintenance of a diastolic pressure of above 40.

McCloud and many other physiologists have determined oxygen dissociation; that is, oxygen being carried by the red blood cells has left the cells by the time the pressure falls to 40. If we are dealing with anoxemia from a low blood pressure, the blood pressure and the pulse pressure become a most important thing. As intracranial pressure increases and the consequent cerebral anemia occurs (with vasomotor center relaxing) down goes the diastolic pressure. The difference between the systolic and diastolic pressure widens with a consequent increased pulse pressure. Formerly, the rule was when the pulse pressure equalled or crossed the pulse rate it was time to decompress. We now say, "When the pulse pressure crosses the pulse rate or tends to cross it, that is the time to dehydrate." Patients treated by the dehydration method are usually no longer stuporous; after a few hours the severe cases have either died or they are entirely out of their stupor.

There are two other observations of great importance. Restlessness and involuntary micturition and defecation. When the patient is restless he is on the verge between compensation and a break in compensation of the intracranial pressure. It means he is either coming out of coma or going into it. Restlessness is variable in time, but not in its meaning to

us. Just a caution here again by way of suggesting the patient at this stage should not be submerged by the use of morphine.

The observations just covered are made for the purpose of determining the increase in intracranial pressure. To my belief no other tests can act as substitutes. I have reference particularly to spinal puncture with manometer readings. Blood pressure findings are of little value, other than just previously mentioned.

In attempting to discuss a rational procedure for the proper management of acute brain and skull injuries, one is immediately confronted with the existence of many diversified methods of treatment.

We differ in our opinions concerning the pathological phases of the condition; differ on the method of therapy and its time of application, until the therapeutic indications become a matter of individual and personal equation. It would appear to me that some definite rules should govern us and a considerably more standardized routine accepted and practiced by the majority in the management of the acute craniocerebral injuries.

For instance, in the treatment of acute cerebral edema, some men advocate solely:

(1) Restriction of liquids to only the quantity of fluid which is physiologically required to carry on the pulse and the general tissue metabolism.

(2) Dehydration by the use of magnesium sulphate or sodium sulphate orally and rectally.

(3) Others rely on glucose intravenously, or hypertonic salt solution every few hours, alternating with magnesium sulphate orally or rectally, as determined by spinal puncture and manometer measurements of the spinal fluid pressure. Thus we attempt to figure and to control the intracranial pressure by the interchange of body fluids into the blood stream and their withdrawal by the methods just mentioned.

(4) Another group do nothing but repeated spinal punctures.

(5) Still others resort to frequent

operative procedures, and yet others institute nothing but rest in bed and ice bag to the head.

Each method cannot be entirely wrong all the time; they all possess their merits. The essential policy for us then is to learn what to do and when to do it so that the patient will derive the most benefit and be returned to normal, or as nearly normal, as soon as possible.

When should we operate? It is when the patient shows deepening coma, cessation of restlessness, vacillation of the pulse, 90 at one moment and 60 at another, tachycardia, increasing respiration and a rising temperature.

If our patient is going to die in a few hours from an injury to the brain there is nothing we can do to prevent it, except in cases of extradural hemorrhage, which must be attended to. When operation is indicated it must be done promptly, for a broken compensation of pressure occurs rapidly.

The operative treatment consists of a right subtemporal decompression which can relieve pressure constantly and safely. There are frequently cases when even this degree of relief is not adequate. All depressed fractures should be elevated as soon as the patient's condition will permit it. All compound wounds of the head must be converted into simple wounds by closing them without drainage.

A warning concerning the cases of extradural hemorrhage and which is oft-times difficult to determine. It may be suggested from three symptoms:

(1) Interval of consciousness before a gradually deepening coma;

(2) Gradual hemiplegia, affecting the face, arm, and leg in the order mentioned, and

(3) Convulsions beginning always in the face and spreading to the arm and leg.

There is only one method of treatment for extradural hemorrhage; remove the hemorrhage and ligate the middle meningeal artery. The treatment must be prompt and effective if the patient's life is to be saved.

Dandy, one of our foremost authori-

ties, states, "about 20 per cent of the serious head injuries will be lost regardless of the methods used in their management. About 70 per cent will recover if left strictly alone. About 10 per cent of the cases that would be lost if left alone can be saved by a well timed and well directed operative procedure."

In summarizing the 70 cases mentioned previously in this paper, we find 45 cases resulted from automobile accidents.

Second: Ages varied from 4 months to 70 years; average age 30½ years.

Third: Average time between injury and examination—one hour, 20 minutes.

Fourth: In this group there were 51 males and 19 females.

Fifth: Findings upon admittance:

(a) Unconsciousness—48 cases; duration varying from 10 minutes to 14 days. Average time of unconsciousness—14 hours.

(b) Severe shock—13 cases.

(c) Other signs of increased intracranial pressure, as determined by slow pulse, normal or slow respiration, low temperature, elevated blood pressure, changes in reflexes—35 cases. The above indications pertaining to compensated cases.

(d) Skull fractures that were determinable—27. (1) Linear—19; (2) Depressed—8.

(e) Ninety per cent had headaches and vertigo after regaining consciousness, lasting from one to two days to months after injury.

(f) Time in hospital—2 to 36 days; average 6 days.

(g) All of the 8 depressed fractures were operated, 2 died. (One operated for laminectomy of the fifth, sixth and seventh cervical vertebra for hematoma of the cord.)

(h) Fifty-nine cases were treated conservatively. Proper attention given to shock and those presenting cerebral edema to the point of beginning decompensation were restricted in the amount of liquids and dehydration by the use of 50 per cent glucose intravenously, and magnesium sulphate orally or rectally.

(i) In only four of this series of cases were spinal punctures done.

(j) Partial disability or defects—5 cases. One retinal edema resulting from hemorrhage. One internal strabismus clearing up after 1½ years. One Jacksonian epilepsy. One cerebellar syndrome. One chronic cerebral edema, as manifested by slow pulse, lack of confidence, periods of depression and irritability, poor judgment.

(k) Total deaths in the series—8; six without operation and two with operation.

CONCLUSIONS

1. The frequency of head injuries in civil life can easily be attributed to the progress of the machine age.

2. Skull fractures in themselves are not fatal. Patients die from injury to the brain.

3. Head injuries if severe have a more favorable prognosis if a linear fracture of the vault is present, which assists in the relief of cerebral edema.

4. Depressed fractures of the skull should be elevated as soon as the patient's condition will permit.

5. Extradural hemorrhage requires early recognition and prompt surgical relief by removing the blood and ligating the artery that is bleeding.

6. Operation is contraindicated in shock and medullary edema.

7. Contusion and laceration of the brain are healed by nature.

8. I have attempted to set forth my ideals leaning very much towards the conservative method stressing the necessity of careful observation in these types of injuries, rather than going into detail of some particular surgical technique, which is naturally, modified by all of us.

My reasoning is somewhat in opposition to the importance of the use of frequent spinal puncture, both for diagnostic and therapeutic measures, believing them to be frequently dangerous and at times defeating nature's effort to compensate for the increased intracranial pressure.

That the information obtained by careful observations are chiefly sufficient to guide us in the management of these cases.

TRICHOMONAS VAGINALIS VAGINITIS*

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Leukorrhea presents itself as the most common symptom of pelvic disease in women. Few diseases of the reproductive organs are present without some form of it. Yet, leukorrhea is treated in a most unscientific manner by the average physician. To properly and scientifically treat disease, we must, if possible, first determine the underlying cause. Leukorrhea is a symptom of pelvic pathology. One of the most common etiological factors of pathological vaginal discharges, discovered 97 years ago, has been overlooked by the majority of physicians. Because I realize its importance clinically, the subject of this paper is *trichomonas vaginalis vaginitis*, or *trichomoniasis vaginalis vaginitis*.

History: The first report on *trichomonas vaginalis vaginitis* was presented before the Academy of Science in Paris by Donn  in 1836. He described the organism and classified it as a flagellated protozoan. He considered that it occurred in pathological discharges of the vagina, probably associated with venereal disease. Some of the later investigators considered that it was non-pathological. Dujardin confirmed Donn 's findings. Later investigators: Koelliker, in 1855; Haussmann, in 1870, and Kuenstaler, in 1883 found the organism in pathological discharges of the vagina in their European clinics. Dock, in 1891, made the first case report of *trichomonas* infection, in the United States. Dr. J. B. DeLee presented a paper before the Chicago Medical Society, in 1919, on the subject. Greenhill's paper in 1928, started the rather prolific literature on the subject in the last few years.

Morphology and Life Cycle: Some phases of the morphology of this parasite are not known. As we see it in the hanging drop, it is a pear-shaped protozoan, two or three times larger than a polymorphonuclear leukocyte and smaller than an epithelial cell. Its measurements

are given approximately as varying between 15 and 30 microns in length and about half that in width. At the rounded anterior end of the parasite, from the blepharoplast, four flagella extend. They are about one-half to three-quarters the length of the organism. The posterior end is pointed. The nucleus, if seen, is located near the anterior end. From the anterior end extends posteriorly, from one-half to two-thirds of the length, what is known as the undulating membrane. This propels the organism forward. It is not always seen. The organism multiplies by longitudinal fission. When seen in the hanging drop, under low or high power or oil immersion, under good light, the organism is motile, the flagella move back and forth rapidly, and the body of the protozoan has amoeboid movement. It is detected by its motion. It may be seen either alone or making its way through a group of leukocytes and epithelial cells. Sometimes the entire mass of cells is in motion. The body of the *trichomonas* is almost transparent. The granules in the cytoplasm and nucleus, the parabasal apparatus, and axostyle are not seen, except by special staining. The organisms may remain active for some time in the hanging drop or slide and cover glass preparation. Too much light in the microscope may make the *trichomonads* invisible. It has not been shown there are cyst forms of this organism. The organism is sometimes seen to engulf leukocytes at the base of the flagella, and also by the body, as an amoeba does. It seems antagonistic to leukocytes. It is usually found in the presence of numerous white cells, epithelial cells and bacteria. The *trichomonads* have been cultured and sub-cultured on various media. The Lynch medium, one part of human serum, to ten parts of 0.5 per cent salt solution, or the same formula, varied by using hydrocele fluid, clear or bloody, or cyst fluid, in place of the serum, was the most satisfactory culture medium found by Cornell. The *trichomonads* grow best at the bottom of the tube and transplants should be made from the lower portion of one tube to the bottom of the other tube. About 15 to 20 cc. of culture medium should be

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used in each tube. The organisms grow best under aerobic conditions, but will grow under anaerobic conditions. Stein and Cope found blood agar slants covered with Lock's solution and five per cent human blood serum, Ph 7.6, a satisfactory medium, and have carried the same strain through many subcultures. There are four other forms of trichomonads described. *Trichomonas buccalis*, found in the mouth, *pentatrichomonas ardon delteili*, *trichomonas hominis*, and *trichomonas fecalis*, all found in the intestine. Some parasitologists say that these forms are all different.

Symptoms: The most common complaint of the woman with this infection is leukorrhea, which may be mild or intensely severe. In a severe case the discharge may literally pour from the vagina and be very distressing. There may be intense itching and burning, both from the external chafing about the vulva and inner thighs, and from the vaginal irritation. Extensive excoriation and edema around the vulva may occur, and occasionally flat and acuminate condylomata, commonly called venereal warts, may result and be very distressing. The disease is frequently diagnosed as acute gonorrhea. Two cases of this kind have recently been under my care.

CASE REPORTS

No. 1. Mrs. J. S.—August 4, 1932, age 17 years, a primipara, seven months pregnant, presented herself for prenatal care. She gave a history of having been seen a few days previously at one of the large city hospital clinics. She complained of a severe leukorrhea, severe vaginal and vulvar irritation, venereal warts, and on examination, extreme vaginal tenderness. The smears at this hospital had been negative for gonorrhea. She had been told, however, that undoubtedly she had gonorrhea. She had been demonstrated clinically to students as a case of acute gonorrhea. With this history, we were immediately suspicious this was a case of trichomonas infection. The discharge was what we consider typical. It was profuse, yellow Nile-green in color, foamy or bubbly, and liquid. The area about the vulva was chafed and irritated, and there were numerous accu-

minate warts. Upon separating the labia, the mucosa was reddened and turgid. The vagina was extremely tender. A small bivalve speculum was introduced into the vagina deeply. Its introduction was incident to a great deal of pain. The vaginal walls and cervix were covered with this thick, yellow-green, bubbly, purulent secretion. They were markedly hyperemic, particularly the vaginal vault and cervix. The small hyperemic areas of the vagina and cervix have given rise to what is called typically the "strawberry" vagina and cervix, or salt and pepper vagina and cervix. The speculum was removed, and taken at once to the laboratory. In the spoon of the speculum was the secretion. It had a pungent odor. Some of the secretion was removed with a dropper, diluted with normal saline solution, and a hanging drop preparation made. Trichomonads were seen in large numbers, easily observed under both low and high power by the motility of the body of the trichomonads and the four flagella. The smears in this case were negative for gonorrhea and the Wassermann reaction was negative. The diagnosis relieved the patient. She was given our usual treatment and her symptoms were relieved within a week. She delivered normally at term. The puerperium was free of morbidity.

No. 2. Miss L. C.—January 12, 1933. Age 21 years, white. She complained of profuse, yellow vaginal discharge, which was foul smelling and very irritating between her legs, particularly upon walking. The discharge and irritation was gradually increasing since February, 1932. Marital history: Married January 21, 1932. Lived with her husband one month and discovered at the end of that time a vaginal discharge, yellow in color. Urination became painful and intercourse painful. She went to a physician in Houston, Texas, who told her it was undoubtedly gonorrhea, although the smears were negative for gonococci. She left her husband and returned home, because of this supposed venereal infection. She was under two private physicians' care, and one clinic's care during the next several months. During this treatment her symptoms all increased in

severity. She was granted a divorce in June of 1932 on the ground of venereal infection. Past history was negative. Menstrual history normal. General physical examination negative, except the vaginal findings of trichomonas infection. The vulva and inner thighs were irritated and edematous. The vagina presented a typical trichomonas findings of the "strawberry" vagina with a Nile-green discharge and extreme tenderness. Smears were negative for gonococci; the Wassermann and Kahn were negative. The patient received office treatments every third day until seven treatments had been given. No trichomonads were found in the suspensions before the last three treatments. The patient had no symptoms after January 21st, nine days after the diagnosis had been made. At the writing of this paper she has had no recurrence.

No. 3. Mrs. E. H.—October 22, 1931. Age 42 years, white. Chief complaints, venereal warts for three months, which were increasing in number despite office treatments and douches under the direction of another physician. Yellow vaginal discharge, moderately severe; irritation of the vulva, and dyspareunia, three months duration, increasing in severity. The discharge and symptoms were worse during and immediately after the menses. General physical examination negative. Smears negative for gonococci; Wassermann and Kahn negative. Vaginal findings were those described previously. Suspension showed trichomonads. There were literally hundreds of venereal warts, large and small. The cervix showed an old bilateral laceration, with a chronic cervicitis and endocervicitis, with Nabothian cysts and ectropion. The usual treatment for trichomonas infection was instituted and the venereal warts treated with a strong solution of trichloroacetic acid solution. Treatments were given every third day. On the eighth day, the cervix was cauterized with the Post cautery. The patient was discharged cured January 22, 1932. She had a total of twelve office treatments. I called her by telephone April 30, 1933, and she has remained clinically cured for

a period now of one year and three months, without recurrence.

As stated previously, the symptoms of this infection may be mild or intensely severe. The vaginal irritation may be so severe that the vaginal walls and cervix bleed easily. The discharge may be blood-tinged. For this reason, in some older women, a mistaken diagnosis of carcinoma has been made. Another frequent symptom is dyspareunia. There are those patients who state that they have experienced several years of normal marital relations without pain, when suddenly intercourse becomes very painful, and at time unbearable. A large number of these cases will show trichomonas infection, and will be completely relieved upon treatment. Another symptom may be a feeling of weight or fullness in the pelvis. This is due to the distended pelvic veins. Nervousness is a usual accompaniment. It may be caused by worry, from fear of having acquired a venereal infection, from the strain on the nervous system of a continuous irritating discharge over several months duration after treating without relief with physicians. When a patient enters an office complaining of leukorrhea, and gives a history of having been under treatment by one or more physicians, without relief, one should become suspicious at once that it is trichomonas vaginitis.

In many instances, unnecessary operations have been performed because of this infection. Bland reports a doctor's daughter who had had a purulent leukorrhea since she was two years old, and when she came under his care, her cervix had been cauterized with the actual cautery 19 times, and there was a mere vestige of it remaining. She was 35 years old at that time, and responded rapidly to the trichomonas treatment. Amputations of the cervix, curettages, or hysterectomies, have all been done unnecessarily in attempting to relieve this distressing leukorrhea, where the physician did not recognize this infection.

Trichomonas is one cause of sterility. Women who have remained sterile for some time, may become pregnant soon after clearing up this infection. Trichomonas infection is more common in col-

ored than white women, probably due to their negligent feminine hygiene. It is more frequent in pregnant than non-pregnant women. It is difficult to cure during pregnancy, but it is easy to relieve the symptoms. It is usually worse during and immediately following the menses, due to the increase of the blood supply and to the blood serum which covers the vagina. It is most common during the childbearing age; it may occur after the menopause, or before puberty. One case was reported in a girl three years old. Recurrence after treatment is common. The question as to its morbidity during the puerperium is questionable. The literature tends to show that it increases the morbidity. Vaginal examinations during labor in known cases of trichomonas infection should be minimal. The cases I personally have seen, which have received treatment during pregnancy, have not had any visible morbidity. The incidence during pregnancy is reported variously between 20 and 40 per cent. The incidence in leukorrheas of non-pregnant women is probably about 10 per cent. In all cases of leukorrhea, where the usual smears are negative, examination should be made for trichomonads. Trichomonads cannot be diagnosed on the ordinary stained smears because their motility is lost and they then resemble epithelial cells. It is usually not associated with gonorrhea; it may be a cause of Bartholinitis. I have seen one case of trichomonas infection, with negative gonorrheal smears, with an acute Bartholinitis. The endocervix is not involved in trichomonas infection.

There is some discussion as to whether the trichomonas is actually responsible for the vaginitis or not. It is generally agreed it is the cause. Under treatment, as the trichomonads disappear, the vaginitis clears up. The foaminess of the discharge, found in about one-third of the cases, may be due to an associated gas-forming organism. The reaction of the discharge to litmus is usually markedly acid. However, Greenhill states it may occasionally be neutral or slightly alkaline.

Mode of Infection: The most probable

site of infection is the intestinal canal. It is probable that a woman may infect herself at the toilet, by sweeping the toilet paper from the rectum toward the vagina. Perhaps the infection occurs because the rectum and the vagina are in such close proximity. However, the mode of infection is not certain. It occasionally causes a cystitis and urethritis. A few cases of acute urethritis in the male consort of a trichomonas vaginitis case have been reported. Recurrence may be due to reinfection.

Treatment: Treatment of this condition is not standardized. The prophylactic treatment consists of instructions to patients as to proper care of themselves after defecation, instructing them to wipe toward the rectum, and be careful in their feminine hygiene. The local treatment varies with each physician. The treatment which I personally use, is as follows: The vulva and anal region are thoroughly scrubbed with tincture of green soap and warm water. As large a bivalve speculum as possible is then inserted into the vagina. The entire vaginal wall and cervix is scrubbed briskly with cotton pledgets soaked with tincture of green soap. Every part of the vagina must be vigorously scrubbed. To do this, one must have a long forcep, and the speculum must be rotated on its axis to reach all parts of the vagina. If the vaginitis is severe, the green soap will cause marked pain. Bleeding from the hyperemic granulation areas frequently results. The vagina is then cleansed with warm tap water and wiped as dry as possible with dry cotton pledgets. The vagina is then thoroughly dried by holding a low pressure air current at the mouth of the speculum for a few minutes. The vagina and cervix are then completely sprayed with a 1-1000 hexylresorcinol solution (S. T. 37), using a DeVilbuss spray connected to the low pressure air current. A tampon thoroughly soaked with boroglyceride solution is then inserted high into the vagina. The vulva and thighs are then wiped dry and painted with a 50 per cent glycerin solution. The patient is instructed to remove the tampon the next day (12 to 24 hours later.) She is instructed to

scrub the vulva and thighs vigorously with tincture of green soap and water. She then takes a tincture of green soap douche, one tablespoonful to two quarts of warm water. The douches should be taken morning and night on the two days following the office treatment. The vulva and thighs are wiped dry and painted with the 50 per cent glycerin solution after each douche. On the morning of the office treatment a douche should not be taken, in order that we may see the discharge and take a suspension for examination. These treatments should be continued until the trichomonads are absent on at least three successive hanging drop examinations. Treatment should be continued during and after the menses. When the office treatments are discontinued, the patients take lactic acid douches daily. Lactic acid douches restore the normal vaginal flora, and are continued for a period of two to three months. I prescribe U.S.P. lactic acid solution, 85 per cent. The patient uses one tablespoonful of this solution to two quarts of water. During pregnancy, the local treatments are continued as outlined, until about six weeks before term. After that time, it is advisable to use four per cent mercurochrome instillations with a sterile catheter every other day. The vulva should be shaved when these instillations are started. Lassar's paste, in place of glycerin on the tampons has given good results. In resistant cases, the vaginal walls and cervix may be painted with tincture of iodine solution in place of the hexylresorcinol solution. Filling the vagina with powdered gaolin 80 per cent, and aluminum acetate 20 per cent occasionally, in place of the glycerine tampons, may be beneficial. Condylomata are treated with a strong solution of trichloroacetic acid solution. Cystitis and urethritis are treated with 10 per cent argyrol instillations.

SUMMARY

1. *Trichomonas vaginitis* is caused by a flagellated protozoan which is two to three times the size of a white blood cell, and is motile.
2. It is probably associated with improper feminine hygiene.

3. The diagnosis is easy to make clinically and microscopically.

4. It is a frequent form of vaginitis, more frequent in pregnant than non-pregnant patients, and during the child-bearing age.

5. It may increase the morbidity of the puerperium if not treated prenatally.

6. The most frequent symptoms and signs are: yellow, Nile-green bubbly vaginal discharge; vulvar and vaginal chafing; irritation, hyperemia, edema and tenderness; dyspareunia, and nervousness.

7. It may cause cystitis and urethritis.

8. It is frequently diagnosed as acute gonorrhea.

9. It is one cause of sterility.

10. It is usually aggravated by the menses.

11. The treatment is successful.

12. Recurrences after treatment are common.

In conclusion, *trichomonas vaginalis* vaginitis is an infection which should be recognized by all members of the medical profession doing obstetrics and gynecology, because of its frequency, its distressing symptoms, and because of our ability to give relief.

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The Kahn Test in the United States Army

In the laboratories of the Army all sera have been tested by both the Wassermann and the Kahn tests since 1926. The Kahn test has proven to be a more sensitive test than the Army standard Wassermann test. Of 11,300 sera tested, 1,795 were positive by the Kahn test and 1,377 were positive by the Wassermann test. Of the 317 sera that were positive by the Kahn test and doubtful or negative by the Wassermann, 25 were not syphilitic. Of the 84 sera that were positive by the Wassermann and negative by the Kahn, 19 were not syphilitic.

*Seymour C. Schwartz. *Mil. Surg.*, Washington, 1933, LXXII, 440.

INTRACRANIAL ANEURYSM

A Case Report

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This case is presented because it demonstrates a rather classical picture of an intracranial aneurysm and yet has unusual features. It was not diagnosed before death but it was possible to study it carefully postmortem.

HISTORY

Family History: Miss "X" age 28 years. The maternal grandfather died of apoplexy, age unknown. Other known history relative to the grandparents is negative. Father, aged 75, is living and well; mother, aged 57, living and well. A brother, the first pregnancy, died shortly after birth, probably due to birth injuries since the mother was in labor from Thursday until Saturday with forceps delivery; the child weighed 12 pounds. Following this there were two miscarriages at two and one-half months, which the doctor informed the mother were due to prolapsed uterus with severe lacerations. The patient was born at full term, the fourth pregnancy; delivery was normal and the mother states that she was in bed only one-half hour before the birth. The mother's sister had three miscarriages. There is no history of nervous breakdown, insanity, syphilis, malignancy, diabetes, tuberculosis, or hypertension other than above, in the family.

Past History: In early childhood the patient had mumps and had measles twice, with no sequelae. She had one abscess on the right leg and another behind the right knee at age eight; she was in bed eight weeks with what was probably an osteomyelitis. There was no disability. Appendectomy at age 10; chicken pox at age 11. She has worn glasses since age 12. The patient had never seemed nervous and her only worries were over financial conditions and her mother. Two weeks prior to her present illness she had a bad cold and ached all over, especially in her back but no worse than with previous bad colds. She was home from

work four days but did not employ the services of a physician and seemed to be quite well afterwards in every respect.

Menstrual History: Onset age 12, always regular, of a 28 day type. Some pain but never so severe that she was forced to go to bed. The flow was profuse and of four to five days duration.

Present Illness: The onset of the present illness was sudden on the evening of March 13, 1932. The patient had been well and apparently healthy; it was her day off from work and she was entertaining a girl friend from a distant town. They had spent the afternoon visiting and walking about the town. About 7:30 p. m. the patient and her friend started to prepare a lunch and because the patient did not feel well she asked her mother to help. She complained of a sudden headache for which she took 5 grains of aspirin and a level teaspoonful of soda in a glass of water. Almost immediately the patient stated that her headache was so bad she could not stand it and she decided to lie down for a while and went upstairs. She then became nauseated and went to the bathroom three times to vomit; the emesis was scanty and was mostly a frothy saliva material with a greenish tinge. After the third time the patient's mother undressed her and put her to bed; she gagged several times and stated that this was the worst headache she had ever had. Three to five minutes later, she became unconscious and it was impossible to rouse her. An attempt to obtain a history of psychological disturbances revealed that she had been frightened two days previously by one of her friends shouting "boo" at her on the stairs in the dark when she did not know there was anyone present. During the afternoon the patient had become slightly angry over a remark someone made about a friend; however, this seemed soon to pass and the patient was as jolly as ever. No diabetic or uremic history could be obtained.

Physical Examination: The patient was a young girl of slender stature, weighing about 110 pounds; she lay quietly on her right side, and appeared to be sleeping normally. The skin was moist and slightly pink. The pulse was

76, regular and of good volume, respiration 18, temperature 99.4°. The pupils were in mid-dilation, but reacted to light very slightly. The reflexes were hyperactive and seemed more accentuated on the right. The right pupil momentarily appeared slightly larger than the left; however, on changing the light the pupils seemed equal. The abdominal reflexes were absent. Pricking the feet and legs produced a defensive withdrawal response while pinching brought no response. Slapping the face with a cold wet towel caused a squinting of all facial muscles but no stimulæ could arouse the patient to open her eyes or try to talk. The lids opened with some resistance; the eyes were turned upward, the mouth was slightly open and could be partly forced open. The neck was not rigid; the head could be flexed forward so that the chin rested on the chest with only slight difficulty. The Chvostek sign was negative. The breath had no acetone or offensive odor. The chest examination showed no abnormality; the heart sounds were normal and revealed no apparent pathology. The abdomen showed no rigidity, no palpable masses or apparent pathology, although deep pressure would cause the patient to roll to one side and try to evade examination. The extremities could be moved but with a certain amount of resistance. It was extremely difficult to completely flex or extend the arms. During the examination the patient gagged once or twice but did not vomit. Shortly after this she had an involuntary micturition.

Course: The tentative diagnosis at this time was hysteria. The mother was advised to watch the patient closely and report to the physician. At 10:30 p. m. the mother called and said the patient was very restless and had tried to get out of bed several times although she was still unconscious. Examination an hour later revealed nothing further except that her pulse rate was 52, regular and of good volume, respirations were 17. The patient could not be roused but was restless and continually moved her right arm and leg. It was impossible to arrive at any definite conclusion in regard to the retina in view of the fact that

she was continually rolling her eyes in every direction. The mother described her as holding her breath once or twice and grinding her teeth. Following a first consultation the following possibilities were considered: hysteria, diabetic coma, uremia or a gross brain lesion. A catheterized urine specimen showed sugar and acetone; one drop of urine gave a 4 plus reaction using Benedict's solution. Considering that the specimen might have become contaminated, a second analysis was made and examination revealed the same. The pulse was 50, temperature 99.4° and respirations were 16 at 1:20 a. m. The nurse reported that at times the patient acted as though she were having convulsions. She remained unconscious and at times was cyanotic.

The patient was treated for diabetic coma, receiving 80 units of insulin intramuscularly and 30 cc. of 50 per cent glucose intravenously. She was also given 2,000 cc. normal saline under the breasts. During this time she vomited a small amount of greenish colored mucus. Thirty minutes after the first 20 units of insulin was given the patient had a chill and external heat was applied. She was restless, the pulse was slightly irregular and had increased to 64; the temperature had risen to 100.4°. At 7:30 a. m. 5 cc. of blood was drawn for a blood sugar determination. At 8:45 a. m. the patient became slightly dyspneic and she had a convulsion which lasted 20 minutes. At 9:00 a. m. she received insulin, 20 units and 40 cc. 50 per cent glucose. The glucose was given in the left arm, although it was with extreme difficulty we were able to hold the arm still. At 11:00 a. m. the patient was given insulin 10 units and 20 cc. of 50 per cent glucose. At 12:00 o'clock she became quiet and seemed to rest. The report on the blood sugar came at that time and showed 52 milligrams per 100 cc. At 4:00 p. m. the pulse was slightly irregular and of good volume with a rate of 76 per minute; respirations were 20 and temperature 99.6. The patient was moaning and thrashing about and moved the right hand and right leg continually, but did not move the left side. Catheterized specimens of urine every four hours still

tested 4 plus for sugar. At 5:00 o'clock the patient was again given 20 units of insulin intramuscularly and 40 cc. of 50 per cent glucose intravenously. At 6:30 p. m. the patient was still restless and moaned; she placed her right hand on the back of her neck as if it pained. At 7:30 p. m. the pulse was 102 and irregular, temperature 100.6° and respirations 18. At 8:00 p. m. the nurse reported that the patient did not attempt to move the right extremities. There was some edema of the face. At 8:40 p. m. she seemed to rouse and attempted to swallow water; she tried to raise herself off the bed but was unable to do so. A neurological consultation was held at this time.

NEUROLOGICAL EXAMINATION

The neurological examination was made 27 hours after acute onset and one hour before death.

Cranial Nerves: The left eye showed a marked hemorrhagic retinitis with slight papilledema which was also present in the right eye but without hemorrhage. According to the history the right pupil had been slightly larger than the left, although at the time of this examination they were equal, in mid-dilation and fixed to light. There were no ocular palsies apparent. There was a slight left facial weakness. The patient was reported to be able to swallow and her tongue deviated markedly to the left.

Motor: There was nearly a complete spastic paralysis of the left side without apparent involvement of the right side. The patient was able to squeeze the finger with the right hand.

Reflexes: There was a moderate increase in all the deep reflexes, the right being slightly more active than the left. There was a dorsiflexion of all toes of the left foot on plantar stimulation and a normal response with the right foot. There was a moderate rigidity of the neck although the Kernig sign was absent.

Course: The patient lay on her back with her right hand under her head. There was an unusual fullness of her face, suggestive of edema. The respiration was slow and regular; the pulse, slightly irregular, 62 beats per minute.

Blood pressure was 130-52. Rectal temperature was 104°. In attempting to determine the rigidity of the patient's neck she opened her eyes slightly. She mumbled a few words in response to questions some of which were understood and seemed appropriate. She cooperated sufficiently to protrude her tongue and to squeeze an object with her right hand. While waiting for atropine to dilate the pupils a lumbar puncture was done. No difficulty was encountered in getting into the spinal canal and a uniformly bloody spinal fluid ran over the top of the 300 millimeter monometer. The patient responded to the procedure by squirming a little but before more than 3 or 4 drops of the fluid had been obtained in the first test tube the patient jerked rather violently and the needle was withdrawn. It was then apparent that she was having a convulsion. Her mouth was drawn to the right and her right arm shook. Respiration stopped and despite artificial respiration and the administration of adrenalin, caffeine and sodium benzoate, she did not respond.

Autopsy: Autopsy was made only of the brain. Grossly, there was an extensive hemorrhage covering the base of the



FIG. 1

Photograph of undersurface of brain, showing hemorrhage.

brain, and to some extent covering the entire surface, with an especially large accumulation over the right parietal and temporal lobes. The convolutions of the left hemisphere were very much flattened, and of the right were grossly misshapen and indented by the clot. There was an extensive hemorrhage filling all of the ventricles but much more extensively on the right side. There were evidences of smaller hemorrhagic areas scattered throughout the brain tissue.

On the base of the brain it could be made out that the right posterior cerebral artery where it connected with the basilar artery was the seat of a rather extensive ruptured aneurysm. Apparently this had ruptured even into the ventricles and had leaked chiefly around the edge of the right hemisphere.

Microscopic: Through the courtesy of Dr. J. W. Kernohan of the Mayo Clinic, sections were made of the tissue in which there is very little evidence to indicate any infection. It was thought that with a history of recent influenzal attack we might be dealing with an inflammatory lesion. In only two vessels in the many sections made were there even from eight to 15 lymphocytes in the perivascular spaces and there were no polymorphonuclear cells.

Discussion: The present case shows the rather confusing diagnostic point of marked glycosuria, an occasional finding in ruptured intracranial aneurysms. The history of influenza had suggested the possibility of a hemorrhagic encephalitis. The location corresponds in general to the most common site of such an aneurysm, namely at or near a bifurcation or branch of an artery, usually in the circle of Willis and more commonly on the right side.

The etiology of cerebral aneurysms has been the subject of much study. In general the grouping has been: (1) inflammatory (including general infection, vegetative endocarditis, septic emboli, syphilis); (2) traumatic, and (3) congenital. Fearnside stressed the infectious origin and in 44 cases collected he found 13 to be in this group. Shore reports one case and reviews a few others

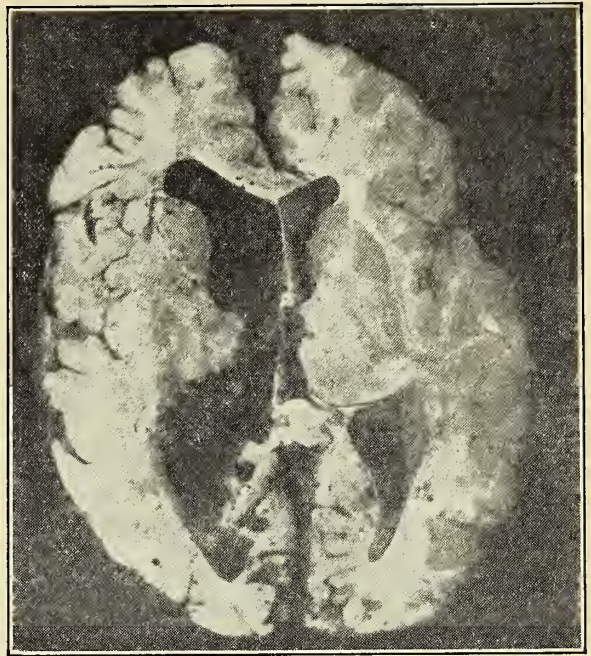


FIG. 2

Photograph of horizontal section of brain through about the midline showing hemorrhage into ventricles.

of syphilitic origin, although syphilis is a relatively rare cause of this type of aneurysms. Likewise, actual instances of traumatic origin are rare although such are cited by Freeman and Kirby. The congenital origin is mentioned later under a brief discussion of pathology.

The incidence of cerebral aneurysm is infrequent. There are many pathological studies made in comparison to clinical, and in the former are found many instances never noted clinically. Fearnside's 44 cases represent 5,432 autopsies; Osler found 12 such cases in 800 autopsies. Beadles' series of 555 cases of death represents 114 new cases and the rest are collected reports. The incidence of sex is about equally divided between male and female.

In the diagnosis of these cases, the most important diagnostic feature, as pointed out by Freeman, is the occurrence of a sudden unexplained, severe headache with a stiffness of the neck. The diagnosis is more definite if this occurs in a young person, accompanied by paralysis and bloody spinal fluid. On the other hand, Parker states that it is only in cases of aneurysm with inter-

mittent leakage and focal compression that correct diagnosis and localization of the aneurysm is possible. Symonds made a clinical diagnosis of five such cases during life, three of which were subsequently verified at autopsy. Freeman specifies that without a bloody spinal fluid it is seldom possible to make a diagnosis of a ruptured intracranial aneurysm. On the other hand he states that in a number of cases death has followed shortly after a diagnostic lumbar puncture and he emphatically warns against repeated lumbar punctures. In one of the 10 cases reported by Keegan and Bennett, death followed shortly after a therapeutic lumbar puncture.

Although the opinion varies there are a number of definite cases of intracranial aneurysm diagnosed as such that live for years. From the reported autopsy findings of the frequency of such, it is apparent that the majority produce few symptoms and are not the cause of death. Treatment must always be palliative even in the cases in which there is an infectious basis. Venesection from 500 to 800 cc. is recommended in an effort to control intracranial bleeding. Ligation of the internal carotid artery on the side of the lesion is indicated if recurrent hemorrhage occurs, although the incidence of hemiplegia with such a procedure is rather high. Symptomatic relief of headache and insomnia are indicated as well as prolonged rest.

Probably the most extensive pathological study of these aneurysms, microscopically, has been made by Forbus who finds that the defect in the arterial wall is located in the media and constitutes unquestionably a *locus minoris resistentiae* in the wall of the vessel. Contrary to the view of many of the writers, he maintains that these aneurysms are not congenital malformations but arise as a result of a congenital muscularis defect. They occur quite independently of an inflammatory process, of arteriosclerosis, or of external trauma. They differ from the aneurysms due to these causes in their location, multiplicity, size and microscopic structure.

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R

HODGKIN'S DISEASE OF THE JEJUNUM, MESENTERY, LIVER, RETROPERITONEAL GLANDS AND BOTH OVARIES*

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The etiology of Hodgkin's disease may be divided into three possibilities.

Some think Hodgkin's disease is tubercular,¹ however, this is not generally accepted at this time. Others consider Hodgkin's as malignant; W. B. Coley² and Gibbons are strongly inclined to the malignant theory. Most recent writers consider it as an infectious process of the character of a granuloma.³ Reed, Fisher, Clark, Simmons, Longcope and Yamasaki hold this view.²

Hodgkin's disease is more common among females in the younger age group; 65 per cent of cases occur in those under 40.

The most important clinical signs of Hodgkin's disease are the following:²

An enlarged gland usually appears first in one side of the neck and is soon followed by enlargement of other glands on the same side; after a few weeks or months, enlarged glands appear on the other side of the neck, and still later, in the axilla and groin. The spleen or liver, or both may be enlarged. The glands are firm, freely movable, and separate when multiple. There may be an irregular temperature as high as 103° F. and lasting for weeks. A severe and progressive

*Read before the meeting of the staff of St. Francis Hospital, at Wichita, Kansas, September 14, 1931.

anemia is usually found in the later stages of the disease.

The abdomen is involved in 6 per cent of the cases.⁴ The intestinal type of Hodgkin's is more rapidly fatal. To confirm a diagnosis a biopsy is permissible.

Five methods of treating Hodgkin's will be considered: Arsenic may be given medically. Mixed toxins of erysipelas and *B. prodigiosus* are used extensively by Dr. Coley of New York.² In early cases, surgery followed by *x-ray* is the generally accepted method of treatment. With *x-ray* 60 per cent of the cases are improved.⁶ In one-third of the cases the glands apparently leave; life is prolonged one to five years. However, the universal fatality of the disease has long been recognized.

The characteristic pathological findings in Hodgkin's are the typical Dorothy Reed cells, large mono- or multinuclear endothelial cells with a clear cytoplasm.⁷ The nuclei are large, the nucleoli are large and clear.

The case I have to report is a white female, 52 years of age. There is no family history of carcinoma or tuberculosis. She complains of pain in the abdomen, loss of weight, 30 pounds in six months; tumor in the abdomen and swelling of the abdomen.

About six months ago she noticed a burning sensation in the epigastrium and five months ago a lump appeared in the left hypogastrium. The abdomen began swelling three months ago and she could feel three tumors. She has had ascites for six weeks. She has had pain in the abdomen and back for three months; constipated for three months and for the last three weeks has had great difficulty in getting her bowels to move.

She had pleurisy, left side, two years ago which was followed by a tumor mass in the left side of the neck; duration about two months. There is still a small lump present in the left side of the neck.

The temperature is 100, pulse 100, respiration 24. The patient is emaciated, pale and appears in distress.

There is a hard freely movable mass in the left side of the neck, about the size of a small walnut. The chest expansion is

shallow but equal. Tactile and vocal fre-

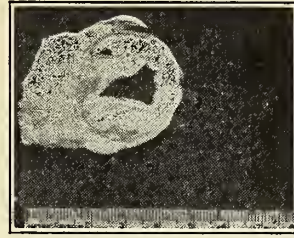


FIG. 1
Crosssection of jejunal lesion; natural size. The whole wall is invaded by the granulomatous tissue causing an extensive stenosis of the lumen.

mitus are normal. There are no heart murmurs and no increase in the area of cardiac dullness. The abdomen is tense; three distinct hard masses can be felt in the lower abdomen. There are fluctuating areas of

dullness according to the patient's position, and a fluid wave can be elicited.

Vaginal examination revealed a hard mass in each fornix about the size of an orange, separate from the uterus. On rectal examination two hard masses were felt, one on each side of the uterus.

The urine showed a faint trace of albumin, hemoglobin 52 per cent; red blood cells, 3,940,000, and white cells, 13,500.

There were 5,500 cc. of fluid removed from the abdomen with the following laboratory report by Dr. Helwig: specific gravity, 1012; thin; cloudy, greenish-yellow; foaming; Rivalta test positive, and cell count 4,250. Sediment under the microscope showed large groups of atypical cells, large nucleus, many cells with several nuclei, some mitosis.

She was given a blood transfusion and *x-ray* treatments by Dr. Martin Hagan but showed no improvement and died July 23, 1931.

The autopsy report by Dr. Helwig follows:

General Inspection: Body of a very emaciated female, white, of about 50 years. The abdominal wall is extended by ascites.

Abdomen: The peritoneal cavity contains 1,500 cc. of straw, slightly cloudy fluid; the sediment shows many mononuclear cells of different size and eosinophile cells. In the jejunum, a 23 cm. portion of the intestine forms a rigid, hard tube of 5 cm. diameter. The wall is from 1 to 2 cm. thick and consists of white homogenous tumor tissue with areas of necrosis and dense fibrosis. The lumen is

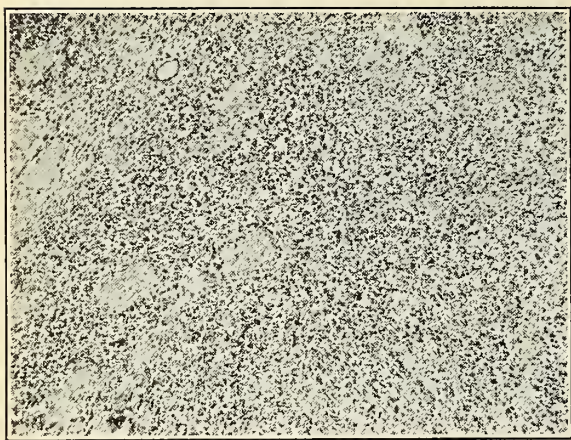


FIG. 2.

Hodgkin's disease of jejunum, low magnification (x75). Invasion of the muscle layer. The muscle bundles are separated by granulomatous tissue.

extremely narrow, only about 15 mm. in diameter. The mesentery of this portion of the intestine is also very thick, and invaded by the same hard tissue as the intestine.

The right lobe of the liver is studded with many spherical tumors of varying size, from 5 to 20 mm. in diameter.

The right ovary and left ovary are transformed in hard, white tumor masses, the diameter of the right measures 13 cm. that of the left 9 cm. Cross section of these tumors reveals a white homogenous tissue with few yellow areas, apparently representing necrotic tissue.

In the uterus, a small submucous fibroid is hanging from the fundus into the cavity. Retroperitoneally, a nodular tumor is found above the pancreas; its diameter is 10 cm.; the consistency is very hard and the cross-section reveals tumor tissue of the same nature as in the ovaries and intestines.

Microscopic Examination: The lesions in jejunum, liver, retroperitoneal glands, mesentery and both ovaries present a characteristic uniform structure. These organs are invaded by a granulomatous tissue which consists of large lymphocytes, plasma cells, eosinophile cells, endothelial cells and giant cells with single or multilobed hyperchromatic nuclei. The prevailing cell type is that of large endothelial cells; eosinophile cells are present in all lesions, but not in very large num-

ber, plasma cells are infrequent, the giant cells of the Sternberg-Reed type are very characteristic constituents of the lesions. In the jejunal wall, extensive amyloid degeneration around the blood vessels is noticeable and in the ovarian tumors a marked tendency to necrosis and fibrosis obscures almost the microscopic picture, since well stained areas of granulomatous tissue are scanty.

In the jejunal lesion, the whole wall is invaded and most of the normal structures are destroyed. Only few remnants of glands are recognizable. The bundles of the muscle layers are widely separated by the granulomatous cell proliferation.

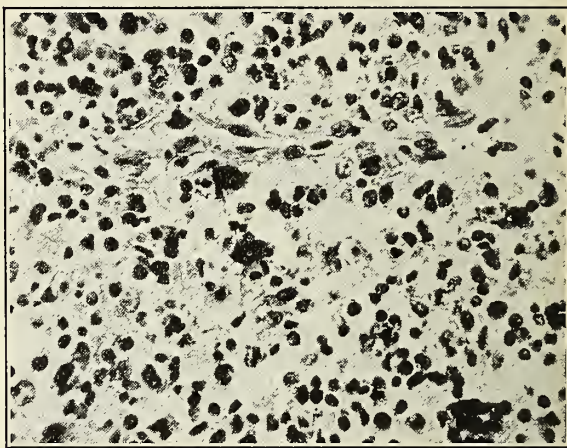


FIG. 3

Hodgkin's disease of jejunum, high magnification (x600). The granulomatous tissue consists of endothelial cells, lymphocytes, eosinophile cells, plasma cells. Three Sternberg-Reed cells are found; two with hyperchromatic single, one with multiple nuclei.

Pathological anatomical diagnosis: *Hodgkin's disease of the jejunum, mesentery, liver (right lobe), retroperitoneal glands, both ovaries.*

CONCLUSION

The etiology of Hodgkin's disease is not settled. Hodgkin's disease of the ovaries is rare but does occur.

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PERIVESICULAR FIBROMYOMA — A BENIGN TUMOR WITH ACUTE MANIFESTATIONS*

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Fibromyoma is microscopically found to be composed of smooth muscle fibers running parallel in bundles which interlace in every direction, and are buried in a rich stroma of connective tissue containing numerous blood vessels.¹

MacCallum says several theories as to the origin of these tumors have been advanced, but none firmly established. There are those who assert that they arise from the musculature of the uterus itself, and those who claim they are derived from the blood vascular musculature.

MacCallum maintains that myomata are much larger in the vagina and urinary bladder than those in the walls of the stomach or intestine. When tumors are found in the region of the urinary bladder, they are usually papillomatosis, which degenerate into malignancy; very rarely is a fibromyoma found. Bladder tumors constitute only about four per cent of all disorders of the genito-urinary tract in man, and in women they are only one-fifth to one-half as frequent as in man. About one-third of all bladder tumors are multiple. They almost always start at the base of the organ, generally in the vicinity of the urethral opening.²

The only reliable symptom of a tumor of the bladder is hemorrhage. They seldom produce any uniform symptom that can be used as a warning of impending danger. When the first symptom is noticed, hemorrhage, the trouble is well under way, and there is little to do for your patient; that goes for either malignancy or fibromyoma.

Fowler³ states that fibromyoma are found in the anterior vaginal wall. They are round in shape and sometimes pedunculated. They are hard or soft, depending whether they have undergone lymphangiectatic changes.

Keys,⁴ quoting Blumm, says that fibroma of the bladder are usually small and pass unnoticed, unless they interfere with micturition, ulcerate, or become infectious.

With these interesting observations noted by the various writers quoted, I wish to present a case of perivesicular fibroma which caused the only illness of any consequence in the patient's life and her death in a short interval of time.

G. S., a plump, freckle faced girl, five feet one inch tall, weighing 135 pounds, twenty-five years of age, and very coarse featured, she had a pronounced number of whiskers on face, mustache, well overweight, but in apparently good health; cheerful, and had a happy outlook on life. She claimed she had always been well, never had any illness except the infectious diseases of childhood.

Chief Complaint: "Hemorrhage from the vaginal tract."

She thought her menses were beginning again. She had just finished her last period ten days previously, and did not understand why this was happening. Her two previous menses were not normal, more excessive flow than usual.

Past History: She had some trouble for the past five or six years of retention of urine. She would feel the urge to urinate, but could not do so on going to the bathroom. In questioning the patient, this was the only symptom she had had of anything wrong until the hemorrhage began, which necessitated the packing of her vaginal tract.

EXAMINATION

Heart: negative

Lungs: negative

Blood pressure: Systolic 120, Diastolic 80.

Urine: trace of albumin

Blood: 70 per cent hemoglobin

Red cells: 3,400,000; white cells 10,000, 88 per cent polynuclear, and 12 per cent small lymphocytes.

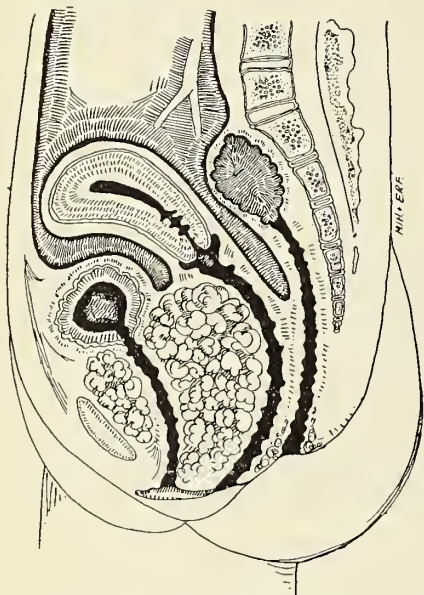
Abdomen was not overdistended. There was tenderness over the middle lower abdomen on hard pressure.

Vaginal examination showed a closed vaginal tract to the examining hand. The anterior wall was crowded down into the

*Read before the meeting of the Montgomery County Medical Society, at Independence, Kansas, January 20, 1933.

vaginal cavity, so that the examining fingers could not reach the cervix. The anterior wall was very hard and firm. I was positive that a mass, possibly an ectopic pregnancy, was crowding the perineum in this manner. I knew I was dealing with some kind of a tumor; therefore, the decision to operate.

On opening the abdomen, in the median line, I was very much surprised to find the uterus and bladder were crowded high up out of the pelvis, and dangerously close to the point of incision; there was no pathology within the peritoneum, it was all below and around the urethra and below the uterus. There was a hard tumor mass of sufficient size to fill the pelvis, and crowded deep down into the vaginal cavity. The abdomen was immediately closed.



When a vaginal speculum was introduced into the vagina, the mucosa of the anterior wall was very friable and bled easily. It appeared to have been treated with a strong caustic. All along the anterior wall there was constant oozing and hemorrhage.

March 22, 1932, was the date of exploratory operation; the next day a pack was inserted into the vagina to control the hemorrhage. The pack had to be kept in situ from then until the patient died.

March 31, 1932, a foul odor developed from the vaginal tract; a douche was given. When the pack was removed, a

very watery pus ran freely from the vagina; the only evidence of a marked degeneration of the tumor.

The absorption of this material by the patient was the immediate cause of her death. Of course, her loss of blood markedly helped to reduce her resistance. In fact her hemoglobin was reduced from 70 per cent to 60 per cent, and her red cells from 3,400,000 to 2,400,000 in eight days' time.

Methods considered for the treatment of this condition were: first, extirpation of the tumor, but I was afraid the urethra would come away with the mass, and second, treatment with the *x-ray*; one treatment was given. Doctors L. D. Johnson and F. W. Shelton, who saw the patient, thought that deep therapy *x-ray* would possibly aid the patient, but she rapidly grew worse and not a great deal of treatment could be given in the interval.

On the twelfth day after her admission to the hospital, the patient died.

An autopsy was held to determine the extent of the tumor, and it was found to completely encircle the urethra at its junction with the bladder, and the microscopical examination showed it to be a very rare "Perivesicular Fibromyoma," according to H. R. Wahl, Pathologist of the University of Kansas School of Medicine.

SUMMARY

1. Symptoms are not well established for this kind of a tumor. When the symptoms do appear, it is difficult to aid the patient.

2. The tumor on bimanual examination had the appearance of an ectopic pregnancy and this was the diagnosis made.

3. The exploratory operation gave definite information as to the location of the tumor, which was confirmed by the autopsy.

4. Treatment in this case was very unsatisfactory—extirpation could not be accomplished because the urethra would be destroyed.

5. The acute degeneration of the tumor, and the absorption of the toxic material, did not give us time to try radium or *x-ray* therapy.

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R

CASE REPORT

Tularemia, From Skinning a Bull Snake

HAROLD O. CLOSSON, M.D.

Ashland, Kansas

Patient: white male, age 28; occupation, a ranch foreman. On or about June 3, a bull snake about five feet long was discovered in the chicken house; it was stunned and skinned while alive and then killed. The patient remembers of no cuts or abrasions on his hands nor does he remember of injuring himself while skinning the snake. His work is rough and heavy therefore he could have had an unnoticed abrasion.

The patient on June 10, became suddenly ill with temperature of 104; no distinct chills but a severe deep aching all over his body. He was seen the next day at the office. Physical examination was negative except for a tender reddened area one cm. in diameter on the dorsum of the left middle finger and a tender slightly enlarged gland in the left axilla. He did not know either were present.

The leucocyte count was 18,400. A pus infection was suspected and the lesion on the finger incised. Fever continued 101° to 102° daily. A painful ulcer with sharply defined edges developed on the finger. The gland in the axilla became extremely painful and tender but remained hard and discrete. Fifteen days after onset of symptoms agglutination for *B. tularensis* was complete 1:5120. The ulcer on the finger was healed and temperature was normal by the end of the fourth week after symptoms began, though the axillary gland continued very hard and painful for a longer period of time. Treatment was symptomatic except for the giving of quinine, which is thought by some to lessen the severity of the disease.

This patient had had no contact with wild rabbits or other wild animals for a long period other than this snake. The larger bull snakes feed on rabbits, field mice and ground squirrels, all of which have been reported as carrying the infection. We assume snakes become infected in this manner.

R

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Removal of Foreign Bodies From the Aural Canal

J. L. MYERS, M.D.*

Having spent ten years in general practice, from personal experience, I know something of the dilemma one faces at times when a patient comes with a foreign body in the aural canal. Often one does not have what one thinks are the proper instruments for such work. However, in most instances, the case may easily be cared for. Always gentleness and care not to traumatize the canal or injure the tympanic membrane should be considered. Many foreign bodies can be picked out with forceps. Where this is not possible try the following.

Impacted Cerumen: If the cerumen seems unusually hard and dry, have the patient put warm mineral oil in the ear three or four times daily for one or two days. A syringe is not necessary to remove cerumen from the aural canal. An irrigating can or hot water bottle may be used. In the tip of the rubber tubing, place a medicine dropper. Use warm water with sodi bicarbonatis (dr. 1 to 0.1). Elevate the can or bottle as high as is needed to get the force desired. Place the tip of the dropper in the canal and let the stream flow steadily against the cerumen along the floor of the canal. Soon the mass is softened and washed out into the pan held under the ear to catch the return flow of water.

Insects: These have been removed by taking the patient into a dark room and holding a light near the ear affected. If this fails, put some warm oil in the canal with patient lying on opposite ear. If the

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insect does not float out, it is killed, and can easily be reached with forceps.

Beans, Corn, Peas: Never attempt to wash out as these swell when warm water is used. Sometimes they have become swollen and are tightly fixed in the canal. Use 95 per cent alcohol in the canal three or four times daily. This dehydrates the foreign bodies in a few days and often they will fall out when the head is so turned that the ear is downward. If these foreign bodies cannot be grasped with forceps after using the alcohol, one may use one of the methods described further on.

Cherry Seeds, Beads, Lead Bullets: These are often snugly fitted into the canal. Try getting a small probe or ear spoon between the lower part of the canal and the foreign bodies. The pressure against the foreign body with the probe in this position makes the foreign body press up against the upper part of canal, and tends to push it out. Never place the probe above, as that pushes the foreign body down into the canal. If failing thus, cleanse the foreign body with alcohol, wrap a probe with cotton, and clip the end off square; dip in collodion and apply to foreign body, and after it has dried and adhered, pull gently. If this fails to dislodge the foreign body, use dental wax on the probe; this usually does the work.

Steel Ball Bearing: If magnet is accessible, use it. If not, use methods described above. If none of these work, and an otologist cannot be secured, it may be necessary to anaesthetize the patient, to remove the foreign body. However, *always* be careful not to injure the tympanic membrane. If, after anaesthetizing, one cannot get the foreign body through the canal, one can incise along sulcus back of ear, push cartilagenous canal forward, and then the foreign body is easily picked out. However, this is a surgical operation, and should be done as such.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

The annual meeting of the National Tuberculosis Association, held jointly with the Canadian Tuberculosis Association at Toronto, June 28-30, drew together a large representation from both countries, as well as two distinguished visitors from England. Dr. Esmond R. Long, of Henry Phipps Institute, reports in this number brief abstracts of the papers and symposiums of the Pathological section.

What is New in Tuberculosis Pathology

Sir Humphry Rolleston, who reviewed the subject of non-pulmonary tuberculosis, dwelt especially on chronic hyperplastic tuberculosis of the intestines and the accompanying hyperplastic peritonitis. He made the interesting suggestion, proposed by preceding investigators, that these unusual forms of tuberculosis, in which tubercle bacilli are difficult to find, might be due to different phases of the several stages of the life cycle of the bacillus of tuberculosis, recently described by several investigators.

Drs. Petroff and Winn of Trudeau, New York, reported further developments in their study of colony variation in the growth of avian tubercle bacilli. From a single strain of this bacillus they separated out four types, the extremes of which formed "smooth" and "rough" colonies on culture media and were respectively virulent and avirulent for chickens.

A paper presented by Dr. Daines of Salt Lake City may explain some of the positive tuberculin reactions reported from time to time leading to slaughter of cattle subsequently proved not to be tuberculous. He described acid-fast bacteria, apparently not tubercle bacilli, obtained from certain skin lesions of cattle reacting positively to tuberculin, but not tuberculous, as shown by post-mortem examination. The bacteria, which appeared to be a previously undescribed variety, and the skin lesions they caused,

evidently induced a sensitization to tuberculin.

A complicated life cycle of the tubercle bacillus, in which several granular phases occur, was reported by Dr. Kahn of Cornell University. He embedded single colonies of tubercle bacilli growing on solid culture media and sectioned them. Stained by the usual methods for tubercle bacilli, sections showed zones of acid-fast, partially acid-fast and non-acid-fast bacteria, conforming closely to the types previously described by Dr. Kahn in his cultures from single organisms.

At a later meeting Dr. Wyckoff of the Rockefeller Institute, New York, also presented a paper on the growth of tubercle bacilli, which was apparently not in agreement with Dr. Kahn's work. Dr. Wyckoff used the ingenious method of motion photography of the growing bacteria on clear solid media. Several kinds of tubercle bacilli, chiefly derived from tuberculosis of cold blooded animals, reproduced by the simplest of all methods, elongation and fission into two new organisms like the original.

Another paper, presented by Drs. Soper, Alpert and Adams, dealt with the relative immunizing properties of a "smooth" type variant of bovine tubercle bacilli, killed by heat, the well known living attenuated BCG strain of bovine bacilli, and living human type bacilli. The heat-killed bacilli caused the greatest protection. Dr. Willis of Detroit described a surprising frequency of tubercle bacilli in the urine, as well as sputum, of children with childhood type tuberculosis.

The second symposium was devoted to silicosis. (A forthcoming number of Abstracts will be devoted to this subject).

PROGRESS IN RESEARCH

A third symposium was given to reports from investigators working under grant from the National Tuberculosis Association. Dr. Richardson of Cornell University reported experiments by himself and colleagues on the respiration of tubercle and related bacilli. The most significant fact was the high sensitivity of the pathogenic acid-fast bacteria to deprivation of oxygen, a characteristic

probably playing a role in the limitation of their growth in the animal body.

Several papers dealt with the proteins of tubercle and related acid-fast bacilli. It was brought out clearly by several investigators that the pure proteins of these bacteria are capable of sensitizing the animal body so that subsequent injections of the same material into the skin elicit an inflammatory response much like that caused by tuberculin in the tuberculous animal. Dr. Aronson of the Phipps Institute, reported that while the protein MA100 almost exactly paralleled Old Tuberculin as skin-testing material, it possessed the capacity, on repeated injections in children, of sensitizing the skin so that false positive reactions were given with later higher dosages.

Dr. Sabin and colleagues of the Rockefeller Institute reported results of similar import from animal experimentation. Their results on inoculation of animals sensitized to one of the proteins of the tubercle bacillus also brought out clearly that the sensitization conferred no increased resistance to infection.

Dr. Seibert of the Phipps Institute reported experiments indicating that the sensitizing character was referable to the high molecular weight of the proteins, and showed that by two methods it was possible to reduce the molecular weight and prepare pure protein substances with full skin-testing potentiality and accuracy, but virtually devoid of sensitizing character. The first consisted in boiling one of the purified proteins in weak alkali (pH 9.0-10.0) and again isolating the protein. The second in isolating the protein directly from an Old Tuberculin prepared by the usual heating method, but derived from a culture on a non-protein synthetic medium instead of the usual glycerol-peptone-meat infusion broth.

From the discussion following, which was opened by Dr. Long, it seemed clear that the preparation finally to be recommended to replace the O.T. of common use, was a protein of non-sensitizing character but full potency isolated by one of these methods, and Dr. Long reported that a plan was under way to

make an objection-free preparation available shortly.

Two papers were presented by Drs. Mariette, Fenger, Duncan and others from the Glen Lake Sanatorium, which showed a surprising lack of specificity in both the pure lipoids and pure proteins of the acid-fast bacilli when used respectively in serological and skin tests. Purified protein prepared by the method for MA100, but from timothy instead of tubercle bacilli, appeared even more potent than MA100 in eliciting skin reactions in tuberculous subjects.

At the final session Dr. James Alexander Miller of New York called attention to the newly recognized frequency of hematogenous as well as bronchogenic spread in pulmonary tuberculosis.

Drs. Wiseman and Doan of Ohio State University reported progress in their work on blood changes in tuberculosis, showing that not only do important changes in the number of lymphocytes occur, but that qualitative variations, referable to age, occur in the lymphocytes, which are of considerable prognostic significance.

Drs. Schroder and Park of New York compared the effect of dead tubercle bacilli and living BCG in inducing tuberculin sensitiveness in children. Positive Mantoux tests occurred in almost all of the children receiving BCG, and in only about a third of those getting dead bacilli, and sensitiveness lasted longer in the former group.

Dr. Burke of Ray Brook, New York, showed that it was possible by intratracheal injection of tubercle bacilli in normal and tuberculous rabbits to produce forms of tuberculosis roentgenologically and pathologically comparable to childhood and adult tuberculosis in man, a result of obvious value for studies on the pathogenesis of the two types of the disease.

Drs. Johnston, Howard, and Maroney of Detroit gave some long-desired data on the development and course of the tuberculin reaction following first infection in childhood. Frequent tuberculin testing and x-raying of a group of children showed that the progress of healing childhood infection from primary lung

infiltration to calcification of the corresponding hilum lymph nodes, averaged about two years, during which the tuberculin reaction became positive, reached a maximum of intensity, and then waned to a lower level.

An experimental study by Dr. de Saivitch and colleagues from the University of Chicago on the effects of a combination of irradiated ergosterol or parathormone with tuberculin in tuberculous animals, not only confirmed previous results on the calcifying action of the first two substances for tubercles, but indicated also that it may be possible to enhance this effect by increasing the blood supply around tubercles by the focal reaction following injection of tuberculin.

—————R—————

LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

I am glad to hear you are launched out in your new work and was not surprised that you classed it as "not so hot." To tell the truth I was in hopes of getting you employment nearer home and something more remunerative than \$12.00 per week. You no doubt would have liked something more elevating than filling cars with gas, polishing windshields, and doing chamber maid work for Model T's. You must recognize the fact, however, that fancy jobs are out of the question, and you will also agree that any kind of work is preferable to loafing. And come to think of it the fellow who can adjust a delicate magneto might also develop something in the way of treating the intricate machinery of the human body; and the individual who can induce a customer to trade in his old tires for a complete new set might develop a selling faculty that would land a one hundred and fifty dollar appendix operation where the prospective customer might have gotten by for many years with an occasional dose of salts or a small package of Nature's Remedy.

There is no work however menial that one need be ashamed of nor none so simple but that it will help one to handle

more complex problems. The depression has practically eliminated class distinction from our social life and the white collar contingent is rapidly falling into the overall ranks. The valiant wielder of the shovel rates well up in society and the fellow who has a job—no matter what it is—drawing down regular wages, is envied by most of his friends. And then think of the contacts you are making. This contact complex has been much emphasized of late and no writer on business or economy feels that his article is complete if he fails to stress the value of contact. You will also get the thrill of being held up Wednesdays and Saturdays or whatever days are customary over there. I would suggest you treat these fellows courteously as they probably have sufficient pull to cause you to lose your job should you offend them. Besides a tire pump in the hands of a jaunty college boy is not apt to get results against two machine guns and a week's growth of whiskers.

As you are aware, the government is arranging to take care of the farmer and no doubt in time will get around to the plumber, blacksmith, lawyer, and doctor. The latter individual we are most interested in. There is no question but that there are too many doctors of certain kinds, and we must acknowledge we have had an overproduction of operations. Surgeons complain there is a great scarcity of good unscarred abdomens on which to work, and to make matters worse there is a vast horde of young medical men breaking into the ranks every year possessed of a tigerish lust to cut up their friends. Maybe the solution will be to have the government pay every doctor for a certain number of operations, but insist that he does not do them for a period of three years and then only when indicated. This would save many people for useful lives besides it would give the doctor an assured income and more time for golf.

This is just another idea of mine and possibly wouldn't work out. I have not submitted the idea to the president and want to study it over pretty thoroughly before doing so as he no doubt will look at it favorably and start the plan to

working a week from Tuesday. At any rate we must agree, our good man Roosevelt does things nor does he procrastinate.

You no doubt are aware that 3.2 is being dispensed in the old home town and there has been no great evidence of the fact social or economic. Let us hope that all may satisfy their cravings by sticking to this brew. I very much fear, however, that it will take something more potent to relieve the appetite that has been created by years of moonshine, canned heat, and wood alcohol.

It's too hot to write a letter even though it be to a dutiful son, what?

Love,

DAD.

—————R—————

ADVERTISER'S ANNOUNCEMENTS

Pablum—Mead's Pre-Cooked Cereal

Mead Johnson & Co. are now marketing Mead's Cereal in dried pre-cooked form, ready to serve, under the name of Pablum. This product combines all of the outstanding mineral and vitamin advantages of Mead's Cereal with great ease of preparation.

All the mother has to do to prepare Pablum is to measure the prescribed amount directly into the baby's cereal bowl and add previously boiled milk, water, or milk-and-water, stirring with a fork. It may be served hot or cold and for older children and adults cream, salt and sugar may be added as desired.

Mothers will cooperate with physicians better in the feeding of their babies because Pablum is so easy to prepare. It gives them the extra hour's rest in the morning and saves bending their backs over a hot kitchen stove in summer. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

—————R—————

Cocomalt

An alarming result of the economic depression through which we are passing is the tremendous increase in malnutrition among school children. A recent survey of 130,000 school children in 16 states showed that 21 per cent were underweight by 10 per cent or more.

One way in which school and medical authorities are meeting this grave problem—combating this ever-increasing menace—is by serving Cocomalt in milk to the youngsters at lunch time. Every glass is equal in food-energy nourishment to almost two glasses of milk alone; and as a result the children very quickly show signs of mental and physical improvement. Wherever possible parents have been asked to cooperate by serving Cocomalt in milk at home. Children love this delicious chocolate flavor food-drink and drink far more of it than they would of milk alone. Very gratifying gains in weight and energy have been reported.

Cocomalt contains a rich supply of Sunshine Vitamin D and is accepted by the American Medical Association Committee on Foods.

THE PHYSICIAN'S LIBRARY

LIGHT THERAPY, by Frank Hammond Krusen, M.D., Director of the Department of Physical Medicine, Temple University School of Medicine, Philadelphia. Foreword by John A. Kolmer, M.D., Dr. P.H., D. Sc., LL.D., Professor of Medicine, Temple University School of Medicine; 33 illustrations. Paul Hoeber, Inc., New York. Price \$3.50.

This book undertakes to give, in concise form, the present status of the various forms of light therapy, with especial reference to the physics, physiology, technique and limitations of the subject. It cuts loose from the voluminous and extravagant brochures so long and so persistently used to propagandize the profession in the merchandising of various machines, and bravely undertakes to scientifically discuss the subject on its merits. The author, perhaps subconsciously, yet effectively, makes the medical reader ashamed of using light therapy to fool the sick, and gradually, but surely, converts him into a conservative and careful evaluator of this therapeutic agent in the scientific practice of medicine.—O.P.D.

SKIN DISEASES AND NUTRITION—Including the dermatoses of children by Erich Urbach, M.D., Docent in Dermatology at the University of Vienna, First Assistant to Professor W. Kerl at the University Clinic For Skin and Venereal Diseases. Authorized English translation by Frederick Rehm Schmidt, A.B., M.D., attending Dermatologist and Syphilologist, Alexian Brothers Hospital, Grant Hospital and United States Marine Hospital; Clinical Instructor of Dermatology in Northwestern University, Chicago, Ill. With 55 illustrations, 38 diagrams and 10 tables. Wilhelm Maudrich, Publisher, 1932, Vienna. Price \$7.00.

This book is an outstanding contribution to medical literature. It is not only of interest to the dermatologist and pediatrician but to every practitioner.

There are two divisions of the book, General Part and Special Part. The first deals with the influence of nutrition on the chemical structure of the skin and biologic reaction of the skin; skin diseases due to malnutrition, alimentary infections and intoxications; dermatoses caused by dysfunction or diseases of the digestive tract; by metabolic disturbance and by nutritive idiosyncrasies; disease of the mucous membrane due to nutritive idiosyncrasies.

The Special Part deals with dietary

treatment of skin conditions such as acne, eczema, and similar diseases.

The author quotes a large number of references but the book is filled with many of his own investigations and experiences.—E.H.D.

GASTRIC ANACIDITY, Its Relations to Disease, by Arthur L. Bloomfield, M.D., Professor of Medicine, Stanford University, San Francisco, California, and W. Scott Pollard, M.D., Instructor in Medicine, Stanford University, San Francisco, California. The Macmillan Company, New York. Price \$2.50.

The authors discuss this subject from a conservative standpoint, and point out the necessity for care before arriving at conclusions. The use of histamine on an empty stomach is particularly stressed in preference to the old-time Ewald meal. The discussions on acidity in pernicious anemia and cancer of the stomach are illuminating. The work should serve as a real help to the internist and the general practitioner.—W.C. McD.

THE ELEMENTS OF MEDICAL TREATMENT, by Robert Hutchison, M.D., F.R.C.P., Physician to the London Hospital and to the Hospital for Sick Children, Great Armond St. William Wood and Company, Baltimore. Price \$2.00.

The first edition of this elementary treatise on medical treatment appeared in 1926, and was built on an annual course of lectures which the author gave at the London Hospital.

This, the second edition, gives a revised and up-to-date chapter on the treatment of anemia, and added chapters on Sedatives, Anthelmintics and Physiotherapy. There is also a very helpful revision of the chapter on "Diabetes and the Use of Insulin."

The book, taken as a whole, is a very useful and handy manual on therapeutics. It is concise and very informative, giving in brief and explicit form the procedures to be taken for almost every disease or ailment found in general practice.

Of course, not being compendious, it will not satisfy the more deliberate and exacting student who has the time and disposition to read exhaustively. But it will prove a very handy manual for the hard-driven doctor who wants a condensed bit of therapeutic information, and wants it right now.—O.P.D.

(Continued on Page 366)

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

PHYSICIANS MUST REGISTER

Each physician who has been licensed to practice medicine in the State of Kansas must have his certificate renewed annually by registering same with the Secretary of the Board of Medical Registration and Examination, and paying a fee of one dollar. The above summarizes briefly the requirements of Section 1, Chapter 276, Session Laws of 1933.

Since 1901, when the medical practice act became a law, 7,656 physicians have been licensed by the board. Many have retired from active practice; others have removed and practice in some other state, while many have died. However, the 1930 directory of the American Medical Association lists 2,168 physicians in Kansas in that year. The number of

physicians licensed since 1930 is greatly in excess of the number of deaths, or removals that have been reported. It is reasonable, therefore, to presume the total number of physicians in the state at the present time is in excess of 2,250.

On or about July 1, 1933, in conformity with the requirements of the 1933 registration law, notices were mailed by the secretary of the medical board to the "last known address of every holder of such certificate" issued since 1901, except those who were known to have died. To date, according to reports, the total number of registrations is approximately 2,000, and a goodly proportion of this number physicians who are not living in the state at the present time, but desire to keep their certificate in force.

The specific time designated by law for registration was July 1 to October 1. If registration is not made during that period, "said secretary shall strike from the register the name of such holder. . . ." Therefore, any doctor of medicine who does not register by October 1, legally cannot practice medicine in the state although he may have been previously licensed by the board. Provision is made, however, for reinstatement by payment of a fee of five dollars, "if satisfactory proof at that time is submitted of his moral fitness."

The law is specific in its requirement. Renewal of the certificate is necessary before October 1, if the physician desires to continue the practice of medicine in the State of Kansas. This requirement also applies to those physicians who live in adjoining states but whose practice extends into Kansas.

If you have not registered, do so at once. If you have not received the registration blank, notify Dr. C. H. Ewing, Larned, Secretary of the Board of Medical Registration and Examination.

CONTRACT PRACTICE

The question of contract practice was given further consideration at the meeting of the House of Delegates, American Medical Association, at Milwaukee. The Reference Committee on Medical Economics recommended that the study of contract practice be continued and that county societies, base action on the statement of the Judicial Council, adopted at a previous meeting. The official statement of the Judicial Council follows:

"By the term 'contract practice', as applied to medicine, is meant the carrying out of an agreement between a physician or a group of physicians as principals or agents and a corporation, organization or individual, to furnish partial or full medical services to a group or class of individuals for a definite sum or for a fixed rate per capita.

"Contract practice per se is not unethical. However, certain features or conditions if present make a contract unethical, among which are: (1) When there is a solicitation of patients, directly or indirectly. (2) When there is underbidding to secure contracts. (3) When the compensation is inadequate to assure good medical service. (4) When there is interference with reasonable competition in a community. (5) When free choice of a physician is prevented. (6) When the conditions of his employment make it impossible to render adequate service to his patients. (7) When the contract because of any of its provisions or practical results is contrary to sound public policy.

"Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect, for good or ill, on the people as a whole."

"THEY CAN'T TOUCH ME"*

All members of the medical profession should realize that it is highly essential, now, more than ever before, that they

maintain their activity and standing with the county society. For the medico-legal protection alone which membership offers, this advice should at least be rigidly followed by the many who have assumed a "they can't touch me" attitude with regard to probable suits for malpractice.

The marked increase in malpractice suits emphasizes the tremendous risk involved in giving up membership which has as one of its most valuable benefits—medico-legal defense. The increase in effort to mulct the doctor is the direct result of economic stress. It should serve as a warning to physicians not only to have their wits about them in their dealings with patients but to see to it that they are adequately protected. In this latter respect physicians can do no better, particularly during these parlous times, than to retain their membership in the county medical society thereby assuring themselves of legal defense when the need arises.

PREVENTION AND TREATMENT OF WHOOPING COUGH

It has been generally accepted for years that the Bordet-Gengou bacillus was the cause of whooping cough. The organism has repeatedly been found in the examination of sputum from whooping cough cases. One investigator, however, recently has advanced the theory that in reality the primary cause is an unknown filtrable virus, with the Bordet-Gengou bacillus probably a common but nonessential secondary invader.¹

Consequently, through the John J. Abel Fund for Research of the Common Cold, of Johns Hopkins University, considerable research work has been done in whooping cough through the use of chimpanzees. The research group concluded as a result of their work there could be

*Bull. W.C.M.S., July 18, 1933.

1. Jour. A.M.A., 99:2115.

no doubt but that whooping cough developed in the apes inoculated with pure cultures of the Bordet-Gengou bacilli or with the whole sputum and it was indistinguishable in its clinical and bacteriologic aspects from the human disease. The results were open to two interpretations: (1) The catarrhal condition represented the action of a not previously recognized filtrable virus which might act as the primary cause of whooping cough, and (2) the catarrhal condition was simply a common cold and the human sputum contained both the Bordet-Gengou bacillus and the common cold filtrable virus.¹

Theoretically, the discovery of a definite causative agent will lead to the development of a more effective method of prevention and treatment. It is reported that approximately 10,000 deaths occur in the United States each year as a result of whooping cough, nearly all in children under five and approximately 50 per cent in those under one year.² Various type of sera, vaccines and drugs have been used with varying success. Recent reports, however, indicate more favorable results in both the prevention and the treatment of the disease.

Makachvili³ during the past four years has treated with a combined streptococcic vaccine, 418 children aged from three weeks to 10 years. Treatment is begun either during the catarrhal period at the beginning or during the paroxysmal attacks. One to four intramuscular injections are given at intervals of four to 78 hours, the dosage being graded. He reports only three per cent of the vaccinated children developed pneumonia as compared with 37 per cent among the unvaccinated. Other investigators report favorable results with this method.

Lewis and Barenberg⁴ gave 30 cc. of normal adult blood to six children exposed to whooping cough but all six developed the disease, but of lesser severity than that of the control group. They consider adult blood is also of definite value in modifying the course of whooping cough.

Ungar⁵ has reported his own observations in the course of a whooping cough epidemic in a children's home and 18 cases in his private practice. Two types of vaccine were used, one which contained only Bordet-Gengou bacilli and the second containing in addition to Bordet-Gengou organism, *B. influenza*, *S. aureus*, *S. Albus*, *Pneumococcus* and *Micrococcus catarrhalis*. Conclusions were drawn that the early use of whooping cough vaccine or of mixed vaccine influenced the course of whooping cough in the majority of cases. The vaccine should be injected during the incubation period, the catarrhal period, or at the latest, the first week of the convulsive stage.

Sauer⁶ states that 7 to 8 cc. of a relatively fresh pertussis vaccine (1 cc.=10 billion), made from five to seven recently isolated hemolytic strains, given hypodermically in divided weekly doses appeared to have immunized an appreciable number of young susceptible children. During the past four years approximately 300 nonimmune children were injected without any untoward symptoms. There were eight certain (cohabitational or household) exposures, and a total of 127 probable (transient or accidental) exposures without any child contracting whooping cough.

Madsen⁷ states the great difficulty in determining the effect of whooping cough vaccination is lack of suitable control material. However, such control material is

2. Jour. A.M.A., 99:1866.

3. Prac. Med. Series, General Medicine. 1932. pp. 153-154.

4. Lewis and Barenberg: N. Y. St. Jour. of Med. 33:97.

5. Ungar, R.: Mediz. Klinik., Berlin. 29:290

6. Sauer, Louis: Jour. A.M.A., 100:239.

7. Madsen, Thorvald: Jour. A.M.A., 101:187-188.

found in the Faroe Islands, wherein because of conditions peculiar to these islands, whooping cough epidemics appear in waves and separated by quite long intervals. A whooping cough epidemic started in 1923 and continued into the year 1924. Vaccination was practiced on an extensive scale, 2,094 being vaccinated as compared with 627 unvaccinated. The majority of both the vaccinated and unvaccinated contracted the disease. Another whooping cough wave appeared in the islands in 1929; 1,832 were vaccinated while 446 were not vaccinated. In this epidemic, the value of the vaccination was much better than in the 1923-24 epidemic, as only 25 per cent of the vaccinated developed whooping cough, while only eight of the 446 nonvaccinated escaped the infection.

Brems⁸ found that phenobarbital sodium in a 0.5 per cent solution, usually in doses of 5 cc. from three to six times daily, in the majority of cases lessened the frequency of violence of the attacks and vomiting, and the exhaustion. The only unfavorable by-effects were an exanthem in seven cases and notable dullness in three.

It would appear, therefore, that many cases of whooping cough could be avoided through use of selected vaccines and the severity of the disease, once contracted, lessened by suitable treatment.

EDITORIAL COMMENT

Thirty-three Kansas physicians registered at the 84th annual session of the American Medical Association in Milwaukee.

Bryan reports complete recovery of six cases of tetanus treated with one per cent intravenous phenol. (*Jour. Tenn. Med. Assn.*, June 1933).

The next meeting of the Board of Medical Registration and Examination will

be held at the Hotel Kansan, Topeka, December 12 and 13, 1933.

The *Journal of the American Medical Association* reports the deaths of 3,142 physicians in the United States in 1932, as compared with 2,952 in 1931.

The American Congress of Physical Therapy announces its twelfth annual scientific and clinical session at the Palmer House in Chicago, September 11 to 15, 1933.

According to reports, Mr. Paul McIntyre, a member of the Board of Visitors of the University of Virginia, recently gave \$100,000 to the university for work on cancer.

Anti-pneumonia serum is of definite value and reduces mortality in Types I and II. Its use should be begun as soon as the diagnosis is made and continued until the temperature falls.

Five Kansas hospitals are approved for internships by the Council on Medical Education and Hospitals of the American Medical Association: Bell Memorial, Bethany and St. Margaret's, Kansas City, and St. Francis and Wesley, Wichita.

The Bureau of Labor Statistics reports \$22,616,004 was paid in old-age pensions in 1932. Seventeen states with pension laws assisted 102,537 persons by old-age pensions at the close of 1932, an increase of 35 per cent over the year 1931.

Dr. John M. Dodson, dean of Rush Medical College for many years, but more recently director of the Bureau of Health and Public Instruction of the American Medical Association, at the time of his death retired, died at his home in Chicago, August 15.

Dr. H. S. Cumming, Surgeon General of the United States Public Health Serv-

8. Brems, A.: *Ugeskrift for Laeger*, Copenhagen. 95:369.

ice, reports in a recent issue of *The Modern Hospital* that some 800,000 patients are found all the time in the 7,000 hospitals in the United States. Approximately 400,000 of these are mental patients; another 100,000 are victims of tuberculosis. Nearly 800,000 babies are born in these hospitals each year.

An Act of the 1929 Congress created the Narcotics Division and authorized two narcotic farms, one at Lexington, Kentucky, and the other at Fort Worth, Texas. The corner stone of the farm at Lexington was laid July 29. Narcotic users in Federal prisons will be transferred to these farms for treatment, while addicts other than those who are Federal prisoners will be accepted as voluntary patients.

Recent reports show 959 physicians have been assigned to render medical care to the 240,514 men in the Civilian Conservation Forestry Camps and Army Reconditioning Camps. Included are: 472 members of the Medical Reserve Corps; 126 army medical officers; 203 naval medical officers; 82 physicians on full-time contract basis, and 76 on part-time contract. It is estimated an additional 200 physicians will be required when the quota of 300,000 is filled.

Among other valuable points of interest in "Speaking of Hair," Dr. William A. L. Styles, writing in *Hygeia*, advocates a semimonthly shampoo for the average person, maintains that the failure of a permanent wave in the majority of cases is attributable to the inexperience of the operator, condemns the use of so-called hair tonics and the use of dyes for the hair, particularly of the mineral dye type, and flays the activities of the quack bent on deluding the public.

According to *Public Safety*, all new passenger cars sold after January 1, 1935, in Pennsylvania and all new buses sold after January 1, 1934, must be equipped with safety glass in windshields, doors, windows and other places where glass is used, according to a law passed by the legislature. Pennsylvania is the fourth state to make such requirement, Massachusetts and Michigan already having such laws, while the New York measure takes effect the same date as Pennsylvania's.

The International Assembly of the Inter-State Postgraduate Medical Association of North America will be held in the Public Auditorium, Cleveland, Ohio, October 16-20, 1933. Many distinguished teachers and clinicians will appear on the program. A major list of the names of the contributors to the program, with other information appears on page 374 of this Journal. All members of The Kansas Medical Society are cordially invited to attend. Registration fee of \$5.00 admits all members of the profession in good standing.

The Society of Plastic and Reconstructive Surgery, New York City, adopted a resolution condemning "sensational presentations of plastic surgery by irresponsible and non-representative individuals and groups." The society calls attention to the fact that plastic surgery is a regular surgical specialty; that those engaged in the practice of plastic and reconstructive surgery should have the same scientific and technical training as the practitioners of any other surgical specialty, and condemned the "performance of any plastic operations by lay cosmeticians and the use of beauty shops, hotel suites, and convention halls for that purpose."

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

Parasites in Feces

Examination of the feces for parasites is one that often requires considerable patience and repeated examinations under suitable conditions.

The collection of the specimen is of great importance. The routine procedure is to administer one ounce of saturated magnesium sulphate in the morning, discard the first specimen and examine the second. Walker advises against the use of salts; however, the writer has not observed unsatisfactory results. If the specimen is collected away from the office, it should be kept warm if the examination is to be made for amoebae. This can be done by putting the specimen in a small jar and packing around it with warm salt or sand. The better method is to pass a rectal tube with numerous small holes in the sides. Amoebae will be found in the mucus entering these holes. At least six or seven examinations should be made before a negative report is given.

In making the microscopic examination dilute with salt solution, not water, and place a cover slip over the drop. The best results are obtained by adding a small amount of dilute neutral red, which will stain the granules of the endoplasm of the amoebae a pink, in contrast to the vegetable cells. To the untrained eye, the two fairly common non-pathogenic parasites, the *Endamoeba coli* and the *Endolimax nana* might be mistaken for the *Endamoeba histolytica*. The main differences are that the *Endamoeba histolytica* is larger and more active than either of the others and also the endoplasm will often contain red cells; while the other two very rarely ever show these cells.

In Kansas, other parasites are not so common as in the south; yet, the writer has observed sufficient numbers of other types of parasites that should warrant a thorough search for tapeworm (*Taenia saginata*); the common round worm (*Ascaris lumbricoides*) and the ordinary "pin" worm (*Oxyuris vermicularis*). It

is very seldom that other parasites are found in this section. *Trichomonas* are fairly common in both the feces and the urine. There is much debate as to their pathogenicity; however, in some cases observed it is my opinion they play a very important part in the pathological process. Yeast cells and different monilia are fairly common and likewise there is much debate over the subject of their importance.

Books on internal medicine give various methods of treatment for the different parasites but regardless of the impression that response to treatment is satisfactory, numerous cases will go on for years and years with their parasites; especially is this true of the amoebae.

A very satisfactory fixation test for determination of the agglutinins for *endamoeba* has been developed, using an antigen composed of an emulsion of the particular *endamoeba* for which it is desired to test. Craig states the test is dependable but is superfluous where repeated examination are made, for in all of his cases he is able to isolate the parasite where he obtains a positive fixation test. He does advise the use of the fixation test as a control in the treatment; that the fixation decreases as the parasites disappear.

Collection of the specimens correctly; examination as soon as possible and selection of flakes of mucus or small pieces of tissue appear to be the most important points in detection of ova or parasites in the feces.

—R—

According to H. B. Mulholland, University, Va., and R. L. King, Seattle (Journal A. M. A., Aug. 19, 1933), the results of gastric analyses in 107 typical endemic cases of pellagra admitted to the University of Virginia Hospital during the past eighteen years confirm the results found by previous observers in regard to the common occurrence of achlorhydria in this disease, even after due allowance has been made for the presence of this condition in normal persons of different ages. The examination of some patients indicated that this condition might be more or less permanent (true anacidity), but in a few instances some degree of normal function returned. The assumption, however, that the presence of achlorhydria was necessarily correlated with such other manifestations as stomatitis, diarrhea, involvement of the central nervous system and anemia was not borne out by this study.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

MONGOLISM

Jenkins propounds a theory of mongolism based on a study of two factors: (1) the relation of mongolism to twinning, and (2) the association of mongolism with a diminished maternal fecundity.

The occurrence of mongolism in twins (both members affected in monozygotic twin pairs, one member affected in dizygotic twin pairs) substantiates the belief that the immediate etiology of mongolism is to be found in the germ cell. However, the author feels that the findings of Shuttleworth, who called attention to the tendency of mongolian idiots to be born of elderly mothers, and the work of Stekloven whose studies demonstrated that the birth of a mongolian idiot is frequently preceded by a period of diminished fecundity, are not compatible with a simple genetic explanation. Rather, the increasing age of the mother, the small size of the family and the frequency of an abnormally long interval before the birth of a mongolian idiot, support the conception that the mongolian idiot is a product of fertilization of an ovum the viability of which is diminished.

The hypothesis that mongolism is due to a diminished viability of the ovum, short of complete failure of development, makes it possible, the author believes, to harmonize the superficially paradoxical evidence pointing toward the germ cell and maternal age as etiologic factors.

The article is illustrated with a series of charts, graphs and tables.

Etiology of Mongolism. R. L. Jenkins, M.D., Chicago. *American Journal of Diseases of Children* 45: 506-519.

OTITIS MEDIA IN SCARLET FEVER

The incidence of otitis media in a series of 14,733 patients with scarlet fever admitted to the Philadelphia Hospital for Contagious Diseases during eight years (1922-1929 inc.) was 10.8 per cent. The incidence of mastoiditis requiring surgical treatment was 1.1 per

cent. Ninety-one and five-tenths per cent of the 1,535 patients with acute suppurative scarlatinal otitis media were children under 10 years of age.

There is a marked seasonal and yearly variation in the occurrence of scarlet fever and accordingly, of scarlatinal otitis. The author also presents detailed figures on the incidence and symptoms according to the time in the period of morbidity, of the onset of the otitic complication.

In the author's opinion, early incision of a bulging tympanic membrane and incision of a ruptured tympanic membrane when the rupture is inadequate for proper drainage tend to lower the incidence of acute mastoiditis requiring surgical intervention in scarlatinal otitis but he has found that repeated incision of a tympanic membrane is seldom of value. Only 7 patients in his series of 14,733 had meningitis.

Williams notes that the useful principles of treatment available today are essentially those that were available 20 years ago.

Otitis Media in Scarlet Fever. Horace J. Williams, Philadelphia. *Archives of Otolaryngology* 17:235-242, February 1933.

AGRANULOCYTIC ANGINA

This study is based on 18 cases with 9 necropsies. Although admitting the concept of agranulocytic angina as a disease entity is still open to question, these authors favor the opinion that it is a valid clinicopathologic entity in the same sense that pernicious anemia is accepted as such. They believe that its nosologic status may remain debatable until a potent specific therapy is available.

All but 4 of the cases studied are dead and of these four, only 2 can be considered cured. In the experience of these writers, pentose nucleotide, which is generally considered the most promising treatment aside from blood transfusion, has not proved satisfactory. They consider it useless in chronic cases.

All but 2 patients exhibited complete absence of neutrophils at some state of the disease. The mean red cell count and hemoglobin percentage (Sahli) in this series are 4,100,000 and 75 per cent, respectively. The authors have been unable

to adduce evidence of excessive peripheral leukocyte destruction. They find marked thrombocytopenia is not common in this disease.

Necropsy study of this series has shown in more than half the cases, a plentiful supply in the leukopoietic centers of the progenitors of the blood leukocytes. The authors point out that this virtual hyperplasia is in marked contrast to the profound peripheral leukopenia characteristic of the disease, and strengthens the hypothesis of primary "maturation arrest" rather than primary "aplasia" to account for the hematologic phenomena of the disease.

Agranulocytic Angina (Pernicious Leukopenia. Thomas Fitz-Hugh, Jr., A.M., M.D., and Bernard I. Comroe, M.D., Philadelphia. *American Journal of the Medical Sciences* 185:552-567, April 1933.

NEUROLOGIC COMPLICATIONS OF SERUM SICKNESS

Forty-seven cases of authentic examples of neurologic complications of serum sickness are analyzed by the author. He finds (1) that males are more frequently involved than females; (2) the disease occurs chiefly among adults (average age, 26.9 years); (3) in 35 cases the interval between the onset of serum sickness and the appearance of neurologic complications was 2 days, and (4) that 34 of the cases developed evidence of neurologic complications following the injection of tetanus antitoxin.

A table on the distribution of the neurologic complications shows in the majority of instances nervous structures associated with the brachial plexus have been involved.

The author includes a table of abstracts of the 47 cases studied. He notes that despite the severity of the symptoms and signs, most of the cases recover completely.

No data as to the relative frequency of the neurologic complications are available, according to this writer, who concludes by emphasizing that the occurrence of such complications should not be construed as a contraindication of the use of sera.

Neurologic Complications of Serum Sickness. John B. Doyle, M.D., Los Angeles. *American Journal of the Medical Sciences* 180:484-492, April 1933.

LOWERED BASAL METABOLISM IN CASES WITH SLOW PULSE RATE

The authors have made metabolic studies of all cases on the wards of their hospital which at any time showed a slow pulse that could not be explained on the basis of vagus stimulation or an increased heart volume due to the increased size of the heart. They report the results of their studies in 52 such cases grouped as follows: (1) bradycardia occurring in the postfebrile stage of acute infections; (2) bradycardia occurring in recent hepatic disease with icterus; (3) bradycardia occurring in brain tumor, and (4) bradycardia occurring in patients under treatment with phenylethylhydantoin.

In these cases they found a correlation between the pulse rate and the basal metabolic rate. The rise of metabolism and the increase in pulse rate occurred together. The mechanism of the lowered basal metabolism in these four groups is discussed.

Schick, Bela, M.D., and Toper, Anne, M.D., **Lowered Basal Metabolism in Conditions Characterized by Slow Pulse Rate.** *Am. J. Diseases of Children* 45: 760-770, April 1933.

TREATMENT OF MATERNAL ATTITUDE IN PROBLEMS OF CHILD GUIDANCE

The treatment of mothers by the case worker in a child guidance clinic is indicated only insofar as their problems contribute to the problems of the child. A mother may have very little awareness of the way in which she is contributing to the problems of her child or may refer him with an understanding that it is she herself who needs to change. She may be so uncomfortable in her relationship with the child that she may verbalize her desire for treatment.

The case worker should find out what the mother needs and what she can assimilate. Three methods of treating mothers' attitudes are discussed and illustrated with cases. They are as follows: (1) working toward an indirect modification of the mother's relationship with the child through interpretation of mechanisms in general; (2) being content with a slight modification of the mother's social attitudes which are interfering with the child's own treatment,

and (3) trying to modify the maternal attitudes by helping the mother to an understanding of their origins in her own past experience making her aware of her own responsibility to change.

The Treatment of Maternal Attitude in Problems of Guidance. Moore, Madeline U. *The American Journal of Orthopsychiatry* 3:113-124, April 1933.

PITUITARY CACHEXIA

Brougher presents the case of a white male, aged 63, having symptoms of anterior pituitary lobe deficiency, in which the cachexia is considered due to a chromophobe adenoma of the pituitary gland. The patient's metabolic rate was -40 and his glucose tolerance curve resembled that of mild diabetes. A positive Goetsch test and the absence of deep pigmentation militated against a diagnosis of Addison's disease. Enlargement of the sella turcica added to a rather typical clinical syndrome of weakness, anorexia, gastro-intestinal upset, asthmatic attacks, loss of weight, low basal metabolic rate, loss of sexual power and libido, falling of axillary and pubic hair, low blood pressure and subnormal temperature makes fairly safe a diagnosis of pituitary cachexia. The patient was treated with anterior lobe extract, 1 cc. subcutaneously, twice weekly. Very definite improvement was noted.

Pituitary Cachexia: Report of a patient treated with anterior pituitary extract: Brougher, John C.: *Endocrinology*. 17:128-133, March-April, 1933.

ETIOLOGY OF POLYNEURITIS

The author attempts in this paper to expand his previously expressed conception of the crucial importance of food deficiency in polyneuritis (M. J. and Rec. 131:441, May 7, 1930). Nine cases of polyneuritis are reported, the etiology of which range from alcoholism to gastrectomy for carcinoma of the stomach; all, however, exhibited noteworthy histories of vomiting or other gastro-intestinal disturbance. All showed a prompt response to the administration of high vitamin diets. Achlorhydria was a frequent finding.

The author reviews the literature of polyneuritis, pointing out the similarity of pathologic changes, regardless of the supposedly specific cause of the given

case, the importance of degenerative rather than inflammatory changes, and the fact that changes in the stomach and liver which may cause inanition, are common accompaniments of the intoxications which frequently cause polyneuritis, i.e., alcohol, lead, arsenic and phosphorus. The possibility of dietary deficiency in diabetes and its obvious role in the vomiting of pregnancy (the cause of the "first" Korsakoff's syndrome) are mentioned. The predominant importance of the vitamin B complex is considered, but the possible importance of the other vitamins, recently investigated is given due weight. It is suggested that high vitamin diets may be used to supplement the specific treatment of any type of polyneuritis. The author is not dogmatic in his conclusions and he recognizes the possibility that a combination of toxic and deficiency factors may be indispensable to the production of polyneuritis.

Etiology of Polyneuritis: Wechsler, I. S. *Arch. Neur. and Psych.* Vol. 29:813-827, April 1933.

TEN YEARS' EXPERIENCE WITH THE KETOGENIC DIET IN EPILEPSY

The authors report the effects of the ketogenic diet on 369 epileptic children (up to the age of 14) treated over a period of 10 years. Of this number, 51 had symptomatic epilepsy, the results being of course discouraging. One hundred and fifty-eight were eliminated because of poor cooperation, too brief a trial, or other unsatisfactory conditions. Of the remaining 160, 36 per cent are "well"; 21 per cent are improved and 43 per cent unimproved. By "well" the authors mean free from attacks for at least a year with gradual resumption of a normal diet. Improved patients have continued the diet for long periods because they are better, or have discontinued the diet but have only occasional attacks. The similarity to previous figures (1927 and 1930) is mentioned; and the pharmacology of the diet is considered. Theories include salt and fluid depletion and anaesthetic action of the acetone bodies. The authors stress Keith's finding that aceto-acetic acid and its sodium salt prevent experimentally produced

convulsions in animals more effectively than other acetone bodies or extreme dehydration, although not quite as effectively as phenobarbital, which, however, is a stronger soporific.

Ten Years' Experience in the Treatment of Epilepsy With Ketogenic Diet. Helmholz, H. F., and Keith, H. M., Rochester, Minn., Arch. Neur. and Psych. 29:808-812, April 1933.

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The Physician's Library

(Continued from Page 356)

MINOR MALADIES AND THEIR TREATMENT, by Leonard Williams, M.D., William Wood and Company, Baltimore, 1933. pp. 393. Price \$3.75.

In the language of the author: "It is experience alone which brings discrimination, but it is a safe rule which bids us receive with caution new methods which are not based upon fresh ideas." This volume is the sixth edition; represents the experience of many years practice and consequently decided changes from the original edition published in 1906. Printed in large type, therefore, easily read. Discusses many of the so-called "minor maladies," such as colds, coughs, sore throats, rheumatism, constipation, neuralgia, headache and indigestion. There are interesting chapters on Minor Glandular Insufficiencies; General Health; Advancing Years; Insanity, and Some Drugs and Their Uses. It is a handy volume for the general practitioner.—E.G.B.

FRACTURES. Paul B. Magnuson, M.D., Associate Professor of Surgery, Northwestern University Medical School, Chicago. 317 illustrations. J. B. Lippincott Company, Philadelphia, Montreal and London. Price, \$5.00.

Written for the man who sees the fracture first. The mechanics of the causation as well as of the treatment of fractures is well explained and the illustrations are numerous and as a rule good.

There are many useful suggestions and the volume is extremely concise in description of the treatment to be employed. The chapters on fractures of the skull and spinal column cover the neurologic features well and there are many suggestions as to exercise and physiotherapy which are not usually found in a treatise on this subject.

Written undoubtedly from an orthopedists viewpoint, it adds an important contribution to the subject with which it deals.—C.E.J.

THE COLLECTED PAPERS OF THE MAYO CLINIC AND THE MAYO FOUNDATION: Volume XXIV—1932. Edited by Mrs. Maud H. Mellish-Wilson and Richard M. Hewitt, B.A., M.A., M.D. Octavo of 1205 pages with 233 illustrations. Philadelphia and London: W. B. Saunders Company, 1933. Cloth \$11.50 net.

This contains the collected addresses of various members of the Mayo Clinic staff on every branch of work done at the clinic. Ninety-nine are reprinted in full, 22 are abridged and 36 are abstracted. Bibliographies are omitted.

As a general review of the most recent advances in medicine and surgery, this volume contains one of the most valuable collections that could be brought together. There are articles of interest in every field of medicine and the volume should be of benefit to any practitioner.—C.E.J.

TEN YEARS OF OBSTETRICS & GYNECOLOGY IN PRIVATE PRACTICE, by John L. Rothrock, A.B., M.D., F.A.C.S., formerly associate professor of obstetrics and gynecology, University of Minnesota; former member of the Miller Clinic and chief of the Obstetrical and Gynecological services of the Charles T. Miller Hospital and the Amherst H. Wilder Dispensary, St. Paul, Minnesota. A clinical report of 1750 obstetrical and 1345 gynecological cases, with comparative analysis of many of the larger groups, and detailed case histories of some of the more important and less common conditions. Paul B. Hoeber, Inc., New York, 1933. Price \$3.00.

This is not a text book, but a well written review of the author's personal private practice. He has classified the different complications of pregnancy, including prenatal, labor, and postnatal complications, and has discussed the results of different methods of handling these cases. His outline and discussion of the gynecological cases is quite thorough and yet abbreviated to the point.—H.J.D.

ANNUAL REPRINT OF THE REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR 1932. Cloth. Price, \$1.00. Pp. 104. Chicago: American Medical Association.

The Council on Pharmacy and Chemistry still carries on its work of informing the medical profession concerning the new medicinal products brought out by the various manufacturers of pharmaceuticals. This volume contains the reports on products considered and rejected by the Council during the past year. Among the reports of special interest are: Amertan, an unoriginal mixture of tannic acid and merthiolate in a water

soluble jelly, marketed under a proprietary, uninforming name; Antiopin, a mixture of indefinite composition offered under a nondescriptive, therapeutically suggestive name and marketed in a way that may foster the drug habit; Eubetin, another insulin substitute for oral administration marketed under a proprietary uninforming name with unwarranted claims; Ferro-Copral, a mixture of saccharinated ferric oxide, manganese citrate and copper proteinate proposed for use in the treatment of pernicious anemia and marketed under a proprietary name with unwarranted therapeutic claims; Hepatex P.A.F., a liver preparation proposed for intravenous use and marketed under a proprietary and insufficiently descriptive name with no satisfactory evidence of the safety of its recommended intravenous use; Bi-So-Dol, an unscientific "alkalinizing" mixture offered under an uninforming proprietary name with exaggerated and unwarranted claims of therapeutic usefulness; Gan-Aiden, consisting mainly of the well known ethyl amino-benzoate (benzocaine), a preparation of undeclared composition marketed under a noninforming, proprietary name; Myodin, Subidin, and Sanguiodin, unscientific preparations of iodine marketed with unwarranted claims and indefinite, incorrect statements of composition, under proprietary uninforming names and Tonikum-Roche (Now Elixir Arsylen Compositum-Roche), a "shot-gun" proprietary "tonic" marketed with misleading therapeutic claims.

MEDICAL RELATIONS UNDER WORKMEN'S COMPENSATION. Report of the Bureau of Medical Economics; R. G. Leland, M.D., Director. The American Medical Association, Chicago. pp. 149. Price 75c.

During the past year, the Bureau of Medical Economics has made a careful study of the evolution of medical services in connection with workmen's compensation laws in the 44 states in which these laws have been adopted.

The first chapter is devoted to the evolution of the present system from the former methods of dealing with injured workmen under the previously existing liability laws. Other chapters deal with accident prevention; the form, functions

and activities of insurance carriers in the administration of workmen's compensation laws; the growth of provisions for medical care; the free choice of physician by the worker; methods of payment for medical services under workmen's compensation laws; professional relations under workmen's compensation, and compensation as the origin and stimulus for certain forms of contract practice.

The conclusions and recommendations cover principles only and suggest the conditions which are believed to be most conducive to the best interest of the workers needing medical care and the profession which gives the medical services.

SENILE CATARACT, Methods of Operating: by W. A. Fisher, M.D., F.A.C.S., Chicago, Ill., U.S.A. Professor of Ophthalmology, Chicago Eye, Ear, Nose and Throat College; Formerly Professor of Clinical Ophthalmology, University of Illinois; Formerly Surgeon, Illinois Charitable Eye and Ear Infirmary; Formerly President, Chicago Ophthalmology Society; Member, Illinois State Medical Society; Chicago Medical Society; Fellow, American Medical Association; Fellow, American College Surgeons; Fellow of the Academy of Ophthalmology and Oto-Laryngology. With the Collaboration of Prof. E. Fuchs, Vienna, Austria; Prof. I. Barraquer, Barcelona, Spain; Dr. H. T. Holland, Shikarpur, Sind, India; Dr. John Westley Wright, Columbus, Ohio; Dr. A. Van Lint, Brussels, Belgium; Dr. O. B. Nugent, Chicago, Ill. 267 pages, 183 illustrations, 112 of which are colored. Published by Chicago Eye, Ear, Nose and Throat College, Chicago, Ill.

Ten years ago, Dr. Fisher published the first edition of "Senile Cataract." During these ten years there have been so many changes in technic, that a second edition is fully warranted. As in the first edition, many of the world's greatest ophthalmic surgeons present their own methods. Hofrat Professor Ernst Fuchs describes his capsulotomy technic. This is unchanged from the first edition. Intracapsular operations are described by Professor I. Barraquer, Barcelona, Spain; the pioneer in suction extraction, with very little change: by Dr. H. I. Holland, Shikarpur, India, and by Dr. Fisher, himself, who describes the technic of Arnold Knapp, Professor Elschnig Homer E. Smith and his own. He makes no special effort to induce operators to take up his pet method. Each technic is written in such a way that it will enable an ambitious operator to perform any method de-

scribed, and he will then be able to select the one which he believes will give the best visual results.—H.L.K.

—R—

PERSONALS—NEWS ITEMS

Caldwell: M. W. Barnes, M.D., formerly of Osage City, has located at Caldwell, Kansas.

Norton: Dr. C. F. Taylor has returned from a vacation spent in Iowa, Illinois and Missouri.

Wichita: Dr. W. P. Callahan enjoyed a brief fishing expedition in Colorado the week of August 13-19.

Kansas City: Dr. Willis McKean and Miss Virginia Shelton were married August 12, 1933.

Wichita: Dr. C. V. Black has returned to his office as County Physician after a vacation of two weeks.

Columbus: Dr. H. H. Brookhart has been appointed as health officer of Cherokee County, vice Dr. A. J. Revell.

Wichita: Dr. H. N. Tihen, Councilor from the Sixth District attended the meeting of the Executive Committee held in Topeka, August 8.

Salina: Dr. W. R. Dillingham has been appointed Secretary of the Saline County Medical Society, vice Dr. L. O. Nordstrom, deceased.

Kansas City: Dr. John A. Billingsley, specializing in eye diseases has located in the offices of the late Doctors J. W. May and P. A. Scollick in the Huron Building.

Wichita: Dr. H. W. Palmer, Dr. Hal E. Marshall, and Dr. E. D. Ebright motored to Pratt, Friday, August 18, to challenge some of the Pratt County physicians in a golf match.

Wichita: Dr. F. J. McEwen has returned to his office after attending the National Convention of the Kiwanis Club in California where he went to represent the Wichita Club as president.

Topeka: Dr. C. H. Lerrigo who sailed for Europe on July 1, attended the meeting of the British Tuberculosis Associa-

tion at Cardiff, Wales, on July 14-16. Mrs. Lerrigo accompanied Dr. Lerrigo.

Kansas City: Dr. S. D. Henry resigned his position as Director of Public Health on August 1. Dr. Henry W. Kassel, graduate of the University of Kansas Medical School, class of 1931, has been appointed as part-time Director of Health, to succeed Dr. Henry.

Topeka: A meeting of the Executive Committee was held in the Journal office on August 8. Consideration was given to the question of application of the NRA to physicians, but as information is not yet available, the following motion was adopted in regard to employees in physicians offices: "This committee recommends to the members of the Kansas Medical Society that they comply with the National Recovery Administration requirements as to hours of service and salaries of all office employees."

—R—

PHYSICIANS, HOSPITALS AND THE NATIONAL INDUSTRIAL RECOVERY ACT*

Mr. Donald R. Richberg, general counsel of the National Recovery Administration, has given an opinion concerning the status of hospitals under the National Industrial Recovery Act. While it relates primarily to hospitals, it incidentally covers all professional men and organizations and all nonprofit organizations. Mr. Richberg says:

"Hospitals, not engaged in carrying on a trade or industry, do not come within the purview of the National Industrial Recovery Act, so as to come under the ordinary requirement of a code of fair competition. There is nothing to prevent any employer of labor outside of trades and industries, any professional man or organization, or any nonprofit organization, from signing the President's Re-employment Agreement and conforming to its provisions. This does not mean, however, that they are under any compulsion to do so other than that resulting from a desire to cooperate where appropriate, and so far as possible, with a gen-

*Jour. A.M.A., Aug. 26, 1933.

eral program of reemployment at shorter hours and higher wages. To the extent that labor is employed in occupations comparable with those engaged in trade or industry, it is of course desirable that similar conditions should prevail."

Outside of the trades and industries, therefore, a hospital, a professional man or organization and a nonprofit organization of any kind are under no legal duty to formulate and adopt a code of fair practice or to sign the President's reemployment agreement. With them the adoption of codes and the signing of the agreement are matters of circumstance and of patriotism. Whether a physician will or will not sign the President's reemployment agreement and display the official emblem in his office, on his automobile and elsewhere may, of course, be determined by the local medical organization in each community. Obviously, if a physician whose financial circumstances enable him without hardship to reduce the hours of his employees and to pay the wages specified in the President's reemployment agreement signs the agreement and displays the emblem, indicating to the public that he has done so, he may work an injustice on his financially less fortunate fellow practitioners. He would, perhaps, leave the public in doubt as to whether their failure to display the emblem is due to lack of patriotism or to lack of professional or financial success. His conduct certainly would not constitute fair practice, which, after all, is one of the prime objectives of the National Industrial Recovery Act. If all physicians in a community cannot without undue hardship sign the President's reemployment agreement and conform to its exact terms as they are written, a local medical society that desires to cooperate with the President without violating the principles of fair practice may follow either of two courses: under paragraph 14 of the President's reemployment agreement it may ask for a modification that will permit compliance without hardship, or it may advise its members to enroll under the consumer's agreement and to display only the consumer's emblem.

COUNTY SOCIETY NEWS

FRANKLIN-WYANDOTTE COUNTY MEDICAL SOCIETIES

July 27, 1933, The Wyandotte County Medical Society, joined the Franklin County Medical Society, at Ottawa, in an afternoon of golf, followed by a fine banquet. The scientific program following the banquet consisted of the following:

"Bronchography"—Dr. L. G. Allen;
 "Presentation of Interesting Pathological Specimens and Case Histories"—Dr. M. A. Walker;
 "Acute Summer Rashes"—Dr. C. Omer West.

Sixteen members of the Wyandotte County Medical Society, attended the meeting. A very enjoyable time was experienced by all. Joint meetings such as this, might well serve to the mutual advantage of several societies, if they were arranged more often.

O. W. DAVIDSON, M.D., Secretary,
 Wyandotte County Medical Society.

—R—

The Defense Board

OF THE KANSAS MEDICAL SOCIETY

**For the Defense of a Member
 Against Suits for Alleged
 Malpractice**

The regular annual dues cover all expense to members.

Furnishes expert legal advice and defense.

O. P. Davis, M.D., Chairman
 917 N. Kansas Avenue, Topeka
 W. F. Fee, M.D., Meade
 C. C. Stillman, M.D., Morganville

DEATH NOTICES

ANDERSON, GEORGE MALCOMB, Lincoln, aged 60, died June 30, 1933, suicide by hanging. He graduated from College of Physicians and Surgeons, Kansas City, Kansas, in 1901. He was a member of the Society.

FOWLER, WILBER E., Brookville, aged 77, died at Salina July 13, 1933, of diabetic coma. He graduated from University of Illinois College of Medicine, Chicago, 1884. He was a former member of the Society.

FORNEY, CHAUNCEY SYLVESTER, Iola, aged 80, died July 13, 1933, of cancer of the liver. He graduated from College of Physicians and Surgeons, Keokuk, Iowa, in 1880. He was not a member of the Society.

KENDALL, ADDISON, Great Bend, aged 68 years, died August 29, 1933. He graduated from Hering Medical College, Chicago, in 1901; had served two terms as a member of the Board of Medical Registration and Examination and also the state board of health. He was a member of the society.

MCBRIDE, JOSEPH STEVENSON, Lyons, aged 65, died July 6, 1933, of chronic myocarditis. He graduated from Kansas City Medical College, in 1898. He was a former member of the Society.

MYERS, THOMAS WILLIAM, Wichita, aged 53, died July 14, 1933, of chronic myocarditis, angina pectoris. He graduated from University Medical College of Kansas City, Missouri, in 1904. He was not a member of the Society.

SOMERS, IRA CLINTON, Chanute, aged 76, died July 7, 1933, of carcinoma of the bladder. He graduated from University of the South Medical Department, Sewanee, in 1901. He was not a member of the Society.

WILSON, WILLIAM PRESTON, Onaga, aged 61, died August 10, 1933, of chronic myocarditis. He graduated from Kansas City Medical College in 1897. He was not a member of the Society.

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

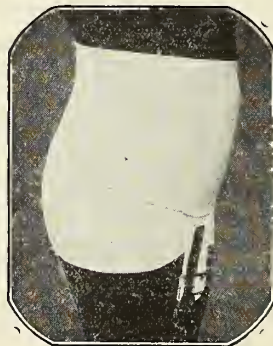
To the Wives of Members of the Kansas Medical Society:

It was a wonderful and profitable experience to attend the big National Meeting of the Medical Auxiliary. The Wisconsin Society was a most gracious hostess and did everything possible to make it pleasant for the visiting women. Our time was taken up from early morning to late evening with committee and board meetings, general sessions, luncheons, drives around the beautiful lake country, dinners, and attending the big open meeting with the American Medical Association.

I wish you might all meet and know our new National President, Mrs. James Blake, of Hopkins, Minnesota. She is a most inspiring and capable woman, having the faculty of meeting and knowing one after a first acquaintance. One feels she is ready to mother and direct successfully every state auxiliary.

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Binder and Abdominal Supporter



Gives perfect uplift. Is worn with comfort and satisfaction. Made of Cotton, Linen or Silk. Washable as underwear. Three distinct types, many variations of each.

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An outstanding speaker on the program was Mrs. Southgate Leigh, who has attended every National Auxiliary Meeting, being present at the organization meeting. Mrs. S. C. Red of Texas was outstanding because of her past work. She is the woman who had the vision of this great National Auxiliary and through her the organization was planned and started.

A more gracious presiding officer could not be found than Mrs. James F. Percy of Los Angeles, California, and hers was a difficult place to fill. During the early part of Mrs. Walter Jackson Freeman's administration as National President she was taken from us by death and Mrs. Percy, as first vice-president, took her place. Mrs. Percy is outstanding in her ability as an executive and we all learned to love her.

One of the most interesting features of the entire convention was the individual reports of the state auxiliaries. They are all doing big things but seem to be better organized in the east and south. However, our own neighbor state Missouri is one of the very best organized states. This is due to the untiring efforts of Mrs. A. B. McGlothlan of St. Joseph, Missouri, who is now National Program Chairman.

In the message from Mrs. James Blake at the National Post-Board Meeting, she told us to remember that if our county auxiliary work failed, our state failed and in turn our national organization would fail. She made a plea for each State to work a little harder in order to complete a firmer national organization. Our keynote should be, *Service to the men in our individual county units*. She urged us to take advantage of the fine material available to all doctors' families through the A.M.A. and the State Medical Journals. May I ask each doctor to help in this work also. They can urge their wives and mothers to support this movement for a more friendly spirit between the families of the medical fraternity. It really is a great privilege to be a help-mate in the wonderful work our doctors are doing.

Most sincerely yours,

Mrs. ELMER J. NODURFTH,
State President.

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of June 30 the following have been accepted:

E. R. Squibb & Sons—Ipral Tablets, $\frac{3}{4}$ grain.

The following product has been included in the List of Articles and Brands Accepted by the Council But Not Described in N.N.R. (New and Nonofficial Remedies, 1933, p. 437):

Merck & Co., Inc.—Carbon Tetrachloride—Merck.

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Erysipelas Streptococcus Antitoxin Refined and Concentrated—P.D. & Co.—This product (New and Nonofficial Remedies, 1933, p. 364) is also marketed in packages of one piston syringe containing 20 cc. Parke, Davis & Co., Detroit.

Sal Ethyl Carbonate.—The carbonic acid ester of ethyl salicylate.—Salicylic ethyl ester carbonate.— $O:C(OC_6H_4.COOC_2H_5)_2$. Sal-ethyl carbonate provides the antipyretic and analgesic effects of the

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salicylates. It is relatively insoluble in water and in the acid secretions of the stomach. For cases requiring a rapid analgesic and antipyretic effect rather than salicylate saturation, tablets sal-ethyl carbonate with amidopyrine are supplied. The product is supplied in the form of Compressed Tablets Sal-Ethyl Carbonate, 5 grs., Compressed Tablets Sal-Ethyl Carbonate with Amidopyrine and Tablet Triturates Sal-Ethyl Carbonate, 1 gr. Parke, Davis & Co., Detroit.

Sterile Ampoules Procaine Hydrochloride Crystals for Spinal Anesthesia, 100 mg.—Each ampoule contains procaine-Abbott (New and Nonofficial Remedies, 1933, p. 58), 100 mg. Abbott Laboratories, North Chicago, Ill.

Sterile Ampoules Procaine Hydrochloride Crystals for Spinal Anesthesia, 120 mg.—Each ampoule contains procaine-Abbott (New and Nonofficial Remedies, 1933, p. 58), 120 mg. Abbott Laboratories, North Chicago, Ill.

Sterile Ampoules Procaine Hydrochloride Crystals for Spinal Anesthesia, 150 mg.—Each ampoule contains procaine-Abbott (New and Nonofficial Remedies, 1933, p. 58), 150 mg. Abbott Laboratories, North Chicago, Ill.

Sterile Ampoules Procaine Hydrochloride Crystals for Spinal Anesthesia, 200 mg.—Each ampoule contains procaine-Abbott (New and Nonofficial Remedies, 1933, p. 58), 200 mg. Abbott Laboratories, North Chicago, Ill. (Jour. A.M.A., July 8, 1933, p. 123).

Solution Colloidal Mercury Sulphide-Hille.—A colloidal 2 per cent solution of mercuric sulphide in water, stabilized with a hydrolyzed protein substance and preserved with 0.2 per cent of tricresol. It is proposed for intramuscular injection in the treatment of syphilis. Hille Laboratories, Inc., Chicago.

Antipneumococcic Serum (Felton) Type I.—An antipneumococcus serum (New and Nonofficial Remedies, 1933, p. 369) prepared by immunizing horses with killed cultures of highly virulent *Diplococcus pneumoniae* isolated from lobar pneumonia. It is refined and concentrated by the method of Dr. L. D. Felton. The finished product contains type I pneumococcus antibodies but not in therapeutically important amounts. It is marketed in packages containing 10,000 and 20,000 units of type I pneumococcus. Parke, Davis & Co., Detroit. (Jour. A.M.A., July 29, 1933, p. 366).

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Blair's Certified Southern Type Flour (Bleached) (Blair Milling Company, Atchison, Kansas).

Certi-Test Flour (Bleached) (The Robinson Milling Company, Salina, Kansas).

Lucky Gluten Flour (Federal Mill, Inc., Lockport, N. Y.)

Gerber's Strained Vegetable Soup (Gerber Products Company, Fremont, Mich.)

Robin's Best Flour (Bleached) (The Robinson Milling Company, Salina, Kansas).

Ovencraft Flour (Bleached) (The Robinson Milling Company, Salina, Kansas).

Mary Lou Flour (Phosphate Added) (Bleached) (The Robinson Milling Company, Salina, Kansas).

Accepted Devices for Physical Therapy

The following devices have been accepted by the Council on Physical Therapy of the American Medical Association for inclusion in its list of accepted devices for physical therapy:

Burdick Diathermy Machine Model D-2.—The unit is claimed to provide sufficient capacity for full range medical and surgical diathermy practice commonly encountered in office and institution, and to produce sufficient electrical energy to provide heat for the treatment of the indications mentioned in the Handbook of Physical Therapy. For surgical work the concern claims that the machine generates enough electrical power for use in electrocoagulation of tonsils and in certain forms of surgery when indicated. The apparatus is arranged for the production of Oudin current, a high-frequency current of higher voltage than the high frequency currents used for ordinary diathermy treatment. Burdick Corporation, Milton, Wis. (Jour. A.M.A., July 8, 1933, p. 122).

Propaganda For Reform

Burnham's Soluble Iodine and Burnham's Iodine Ointment Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that Burnham's Soluble Iodine, marketed by the Burnham Soluble Iodine Co., Auburndale, Mass., was rejected by the Council in 1915 as a semisecret preparation marketed by means of extravagant and dangerous therapeutic claims. In 1929, a communication was received from the consulting pathologist of the Burnham Soluble Iodine Co., which seemed to indicate that the firm was anxious to make its products eligible for admission to New and Nonofficial Remedies. The product was stated to have the following composition: "Free Iodine 3.5 per cent, Hydrogen Iodide 1.5 per cent, Total Iodine 5.0 per cent, Ethyl Alcohol 42.0

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per cent." As a result of the Council's criticisms of the claims advanced for the product, proposed revisions of the advertising material were submitted from which the objectionable features had been essentially removed. The current advertising shows that the proposed revisions have not been carried into effect but that instead the product is being marketed with claims which are as unwarranted as those which caused the Council to reject the product in 1915. There is no evidence that Burnham's Soluble Iodine will do anything more than potassium iodide or, if the physician prefers, compound solution of iodine. Recently the firm has marketed Burnham's Iodine Ointment, said to contain free iodine, salicylic acid, methyl salicylate, menthol and anesthesin (ethyl aminobenzoate-U.S.P.) in a petrolatum base, all in unstated proportions. This appears to be an unscientific preparation containing an excessive number of active ingredients, the presence of only one of which is indicated in the name. As with Burnham's Soluble Iodine, many extravagant claims are made for this ointment. The Council found Burnham's Soluble Iodine and Burnham's Iodine Ointment unacceptable for New and Nonofficial Remedies because they are semisecret preparations marketed with extravagant and unwarranted therapeutic claims. (Jour. A.M.A., July 1, 1933, p. 33).

Ralston Wheat Oata (New Name) New Oata (Former Name) Not Acceptable.—The Committee on Foods reports that the Ralston Purina Company, St. Louis, has changed the name for its previously accepted "New Oata," a mixture of rolled oats and wheat, much the greater proportion of which is oats, to "Ralston Wheat Oata." The new name connotes that the wheat is in greater proportion than is the oats, which is contrary to fact. The label states, "This unusual porridge combines the distinctive flavors and

the abundant health-building qualities of whole rolled wheat and whole rolled oats." Wheat and oats do not have "health building qualities" any more than do other common foods. The company has not expressed itself as willing to change the inappropriate name and label statement. The acceptance of this product is therefore being withdrawn. (Jour. A.M.A., July 8, 1933, p. 125).

Sac-A-Rin Brand Apricots, Bartlett Pears, Muscat Grapes, Royal Anne Cherries, Tidbits, Hawaiian Pineapple, Seedless Grapes, Yellow Cling Peaches and Whole Ripe Kadota Figs; Acceptance Withdrawn.—The Committee on Foods reports that the manufacturer, the Kings County Packing Company, Ltd., Oakland, Calif., has not provided the complete list of the ingredients and quantities thereof, chemical analysis, specifications or description of materials used in its preparations, and description of manufacture being required for all accepted foods by the Committee's present rules and regulations. The acceptance of these products is therefore withdrawn. (Jour. A.M.A., July 8, 1933, p. 125).

Intravenous Use of Barbitol Compounds (II).—The Council on Pharmacy and Chemistry reports that in 1931 it decided on definite limitations for the intravenous use of barbitol compounds for induction of anesthesia and sponsored the following statement: "Their intravenous use should be limited for the present to conditions in which oral administration is not feasible either because the patient is unconscious, as in cerebral hemorrhage, eclampsia, or status epilepticus, or because he resists, as in delirium, or because a very prompt action is imperative, as in convulsion from local anesthesia." In the consideration of sodium amytal and the brands of pentobarbital sodium, the Council recognized that these drugs might be administered intravenously in the condi-

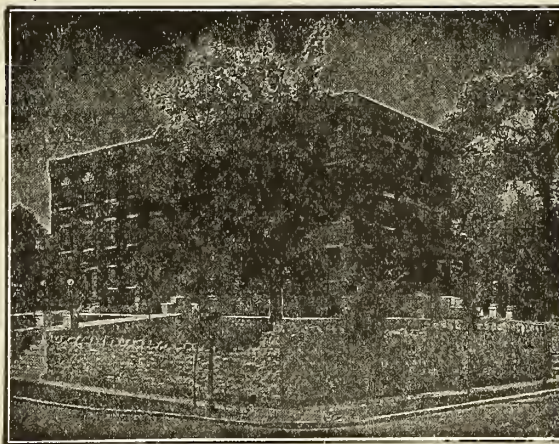
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tions mentioned in its report and laid down certain stipulations with regard to propaganda for their intravenous use. In the recent consideration of Pernoston, a barbituric acid derivative marketed only in injectable form, the question was raised as to whether or not in the light of accumulated experience it was desirable to relax the limitations which the Council had placed on the intravenous use of barbitol compounds. A questionnaire was sent to a selected list of surgeons, anesthetists and others asking whether they consider that the time had arrived when the Council should agree to the advertising of preparations of soluble barbiturates for intravenous injection for induction of anesthesia. The Council has given careful consideration to the replies to the questionnaire, and it believes that the evidence overwhelmingly sustains its previous conclusion concerning the limitations for the use of the soluble barbiturates in the induction of anesthesia. The Council therefore has reaffirmed its previous decision with reference to the advertising of these substances. (Jour. A.M.A., July 15, 1933, p. 208).

Hosal and Bromhosal Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that Hosal and Bromhosal are products marketed by the Abbott Laboratories as "Two Substitutes for Table Salt where Sodium Chloride is contra-indicated." No adequate statement of composition is given in the advertising or on the package. The only analysis available appears to be that given for Hosal by von den Velden (The Low Salt Diet, Clin. Med. & Surg. 39:257 (April 1932) as follows: Calcium 11.7 per cent; sodium 15.3 magnesium, traces; poly-amino-acids; low fatty acids, amounts not specified. Con-

cerning the composition of Bromhosal, von den Velden states: "Bromhosal is a 60 per cent bromine preparation on the basis of Hosal, composed of calcium-sodium double salts of poly-amino-acids on the one side and low fatty acids on the other." The advertising emphasizes the idea that "It [Hosal] contains only a minute quantity of sodium, and is free from sodium-chloride." It contains 39.2 per cent of the sodium contained in table salt; hardly to be spoken of as "a minute quantity." The misleading statement must be regarded as harmful in view of the well established fact that sodium, rather than chlorine, is important for the production of edema. From organoleptic tests there was agreement that the flavor imparted to foods by Hosal was distinctly different from that of table salt and that the flavor was unpleasant, resembling somewhat the flavor of meat extracts. The advertising circular states that "Bromhosal consists of 60 per cent bromine chemically combined with Hosal. . ." The misleading statements with regard to the absence of sodium chloride apply, therefore, to both products. Bromhosal was found to be definitely more palatable and saltier than Hosal. It was pointed out, however, that the product is proposed not as a salt substitute, but as a medication. It is offered as a substitute for the official bromide preparations such as sodium or potassium bromide, which cost far less, without any evidence of advantage over these salts. The Council declared Hosal unacceptable for New and Nonofficial Remedies because it is a preparation of semisecret composition marketed with misleading and unwarranted claims; it declared Bromhosal unacceptable because it is a preparation of semisecret composition marketed

INTERNATIONAL MEDICAL ASSEMBLY

INTER-STATE POSTGRADUATE

MEDICAL ASSOCIATION OF

NORTH AMERICA

Public Auditorium

Cleveland, Ohio

OCTOBER 16-17-18-19-20, 1933



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REDUCED RAILROAD RATES FROM ALL PARTS OF THE UNITED STATES AND CANADA

with misleading and unwarranted claims as a potentially dangerous substitute for bromide therapy with the entirely adequate official preparations. (Jour. A.M.A., July 22, 1933, p. 280).

Addition of Phenolphthalein, Acetylsalicylic Acid (Aspirin) and Other Drugs to Chewing Gum, Candy and Food Articles.—The Committee on Foods reports that medicating common food articles with drugs—such as the addition of phenolphthalein to chewing gum, acetylsalicylic acid (aspirin) to candy, and senna to bread—tends to promote indiscriminate self-medication and is to be unqualifiedly condemned as a menace to public health. The preparation of medicines with confections, such as sugar or chocolate, as a device for making unpalatable drugs more acceptable is quite a different matter from the addition of drugs to articles of foods that are bought by the public without restriction. This ruling, therefore, has no reference to so-called candy medications prescribed by a physician and taken under his directions. (Jour. A.M.A., July 22, 1933, p. 281).

Cold-Quartz Ultraviolet Generator.—The apparatus consists essentially of a Geissler tube (grid) made of fused quartz, a step-up transformer and a regulating choke coil. It is highly evacuated of air and the space is supplanted with an atmosphere of rare gases, xenon, krypton and argon, and a few drops of mercury. The Cold-Quartz Ultraviolet Generator operates on 110-120 volt alternating current. Evidence has not been received from the firm to substantiate the claim that radiations from this lamp will cure or protect against rickets in children. It is reasonable to assume, however, that the cure of rickets in animals with radiations from the Cold-Quartz Ultraviolet Generator might well be interpreted as sufficient evidence, and equal effectiveness may be presumed when the radiations are applied to rachitic babies. A point still under consideration is whether the radiation will at the same time destroy vitamin D

as well as activate it. It seems to have a place in the treatment of skin diseases and infections, but this has not been fully established. Conclusive evidence must be presented to substantiate its efficacy as a dental therapeutic agent. Its use by a layman as a sunlamp is considered dangerous. The use of goggles by the operator and the patient is advised. Electro Therapy Products Corporation, Ltd., Los Angeles, Calif. (Jour. A.M.A., February 25, 1933, p. 573.)

—R—

At a Class for Midwives in Carolina

Instructor—"Name the early signs of pregnancy."
Dusky Granny—"I disremember what you said de was, suh; but here is what de is: I calls um 'de 3 ats.' Foamin' at de mouth; sick at de stummick; an' mad at de husband.—Southern Medicine and Surgery.

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APPLICATION FOR MEMBERSHIP

To the Officers and Members of the

.....County Medical Society

GENTLEMEN:—I hereby make application for membership in your Society, and, if accepted as a member, I agree to support its Constitution and By-laws, to practice in accordance with the established usages of the profession, and will in no way profess adherence or give my support to any exclusive dogma or school.

1. I was born at.....on the.....day of.....1.....

2. My preliminary education was obtained at.....
(Public schools, high school or college)

.....located at.....from which I
(City and State)

graduated in the year 1.....and received the degree of.....

3. My medical education was obtained at.....
(Name of Medical College)

.....located at.....

from which I graduated in the year 1.....

4. My state certificate was issued.....
(Name of State and date of license under which you are practicing)

5. I have practiced in my present location.....years; and at the following places for the years
named.....
(Name each location and give dates)

6. I hold the following positions:.....
(Give college and hospital positions, insurance companies for which you are the examiner, etc.)

7. Specialty.....

8. Residence.....Street

9. Office.....Street

10. Office Hours.....

Respectfully, Name.....

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NOTE.—The above information is primarily for use in the Card Index System of the County and State and for the American Medical Directory.

THE JOURNAL

of the

Kansas Medical Society

Vol. XXXIV

TOPEKA, KANSAS, OCTOBER, 1933

No. 10

ORIGINAL ARTICLES

RELATIONSHIP OF GENERAL PRACTICE TO INFANTILE PARALYSIS*

C. T. HINSHAW, M.D.
Wichita, Kansas

It is not the purpose of this paper to present a great mass of statistics, nor is it my privilege to tell you the results of an original investigation. I do wish to define briefly the present status of infantile paralysis in this state. It is apparent our local profession is not sufficiently concerned with this disease. It is, therefore, desirable to review the things considered to be of greatest importance in its early recognition and proper management. It is hoped this will provide a stimulus to an increased interest in infantile paralysis locally.

I wish to start with the premise that infantile paralysis is not a condition of interest or importance to just one branch or specialty of medicine; it is distinctly not just an orthopedic problem. Proper orthopedic handling is indispensable; but it constitutes only one important phase of the management of these cases. By the same token this disease is not just a matter for the neurologist, the internist, nor the pediatricist. I wish to emphasize this because the present attitude of the rank and file of the profession is to consider infantile paralysis as essentially a matter to be referred to the orthopedist. This is, in my opinion, not productive of the best results for the patient, which must be our first consideration.

It is a self-evident fact that the majority of cases of infantile paralysis have always and will continue to be seen first by the men who see sick babies. These men are not orthopedists; to them belong the greatest responsibility. It must

be remembered that in most cases the early handling these patients receive has most to do with the result. It is a well established fact that the majority of cases in this state coming to paralysis have not been recognized as such until paralyzed. It is regrettable that in most of these cases there has been no attempt at early and careful handling by the use of accepted therapeutic measures. This condition, disconcerting though it is, does not merit censure of the individual physician. It serves to illustrate, however, the fact that to date little has been done in this section to stimulate interest on the part of the profession to the need of a more careful attitude in this.

We are in a constant state of unpreparedness. In time of epidemic, as in 1930, we are overcome by hysteria. Towns are practically blockaded. Normal trade and social intercourse are at a standstill because of the unreasoning fear that grips our communities. This is entirely unnecessary. It is, therefore, essential for the benefit of the whole community that the medical profession should be less apathetic. We should exercise our responsibility by doing the most possible for the disease victims; and by advising sensible quarantine regulations we should save the public a costly emotional spree.

With the hope that I can in a small measure point the way to a proper course, I wish to review briefly for you the more salient points of this disease. The early tentative diagnosis and treatment are of greatest importance. Controversy as to means of diagnosis or method of treatment is not within the scope of this paper. It is my desire rather to attract your attention to what I consider a problem of increasing importance.

Infantile paralysis, so-called, is a disease of comparatively recent origin. Early descriptions were made by Under-

*Read before the 75th annual meeting of the Kansas Medical Society at Lawrence, Kansas, May 2, 3 and 4, 1933.

wood in a volume on "Diseases of Children," published in 1784, and by Jerg (Shaw) in 1816. Somewhat later more complete descriptions were published by Heine in 1840, and by West in 1848. The first epidemic reported in this country was in Louisiana in 1841. George Colmer reported 10 cases in one community and ascribed the cause, as did most of the other early writers, to teething. Wickman described an epidemic in Norway in 1905, and gave us an excellent classification of the various types of this disease.

EPIDEMIOLOGY

It is noteworthy that infantile paralysis is more prevalent in the summer months; that it progresses in waves over our continent, and is scattered in its distribution. It quite often selects its victims in most isolated districts, and rarely occurs twice in the same family even though there are several young children, who are its chief victims. Different epidemics also vary in severity, which trait is of course not confined to this disease.

Case and death records are available for Kansas since 1908, when there were 100 cases recorded, with 33 deaths. In 1930 there were 694 cases with 64 deaths, a fatality record of 9 per cent. This is the largest number of cases with the smallest case fatality record in this state. From reports given, it is apparent that the disease is increasing in prevalence in all parts of the civilized world. Accurate figures are not available, but it is unquestioned that most of the cases in this state that come to paralysis have not been recognized as such until after the acute stage of the disease has passed and there is definite paralysis. This is, without doubt, in part due to the extreme isolation of some cases, and the reluctance to call a physician in other cases, and can only be corrected by educational measures.

ETIOLOGY AND BACTERIOLOGY

As indicated above infantile paralysis is essentially a disease of early childhood, but there are variations among epidemics in this respect. There is some question as to the causative agent and means of transmission of this disease. It is generally accepted that the causative factor is a filtrable virus, with its nor-

mal habitat in the nasopharyngeal mucous membrane. It has been established that there is a general distribution of healthy carriers of this virus similar in distribution to Klebs-Löffler carriers, and in the proportion of about 1 to 100. This virus is said to be resistant to freezing, but to be destroyed by a temperature of 45 degrees centigrade in one-half hour. Avenues of infection of the human body are thought to be most consistently the nasopharyngeal secretions, and probably the intestinal secretions. This has been demonstrated experimentally, but so far as the actual disease transmission among human beings is concerned, is rather a matter of deduction than of positive proof.

PATHOLOGY

Infantile paralysis is a generalized infection, the results of which are most marked in the nervous system. It has been given various names and classifications presumably descriptive of the particular group of cases that each writer has seen. The one thing common to these various groups is that a certain percentage, but not all of each group, has terminated in a flaccid paralysis. Neither can any of them fit another disease classification. I have used the term infantile paralysis consistently because it has been most widely used of all, and because it does about as well as any.

In 1905 Wickman observed an epidemic in Norway. At that time he classified the broad group of central nervous system conditions that were epidemic as belonging to infantile paralysis. Many authorities prefer to exclude parts of this group. That is a matter to be settled elsewhere. In the light of our present knowledge, his classification serves well as a guide in the management of any included cases. It is as follows:

1. Ordinary spinal paralysis—anterior poliomyelitis.
2. Progressive paralysis, usually ascending, less often descending—Landry's paralysis.
3. Bulbar paralysis—polioencephalitis of pons.
4. Acute encephalitis—giving spastic monoplegia or hemiplegia.
5. Ataxic type.

6. Meningitic type.
7. Polyneuritic (multiple neuritis) type.
8. Abortive type.

The first stage in the pathological process is an acute interstitial meningitis, usually most marked on the anterior surface of the spinal cord. On the cord itself there appears a hyperemia and a collection of round cells in the lymph spaces surrounding the vessels, as a result of which in many places the cells are so numerous that they press on the lumen of the vessel and obstruct the circulation. Minute or extensive hemorrhages occur, and there is extensive edema. The lumbar enlargement of the cord is most often affected, and the anterior horn more often than the posterior or the white matter. The reason for this process being more extensive in the anterior horn is because the blood supply there is more abundant. The damaging effects, therefore, are to be attributed: (1) To direct pressure on the nerve cells by hemorrhage, edema, and exudate; (2) to the anemia following the constriction of the blood vessels, which is probably the most general and important change, and (3) perhaps to a direct toxic action of the virus itself on the nerve cells.

On account of this pressure and anemia, the nerve cells may degenerate; yet if the exudate or hemorrhage or both are absorbed soon enough the cells may recover function. On the other hand if the unfavorable conditions have been prolonged, or are excessive, the changes in the nerve cells may go on to complete degeneration.

In this connection it is interesting to note a case reported by Toomey and Lipson.¹ This case was marked by a generalized muscular involvement, particularly of the lower extremities. It cleared up spontaneously in a few week's time except for a slight weakness in the left leg. Sometime later the patient returned to the same hospital with a fatal pneumonia and was posted. Examination showed marked destruction of the anterior horn cells on both sides; only a few cells remained. This is an excellent example of the disparity between the

clinical picture during life and the pathological picture postmortem.

In addition to changes in the spinal cord, it is very important to note that the same sequence of change is found to a less degree in the brain, medulla, and pons. The posterior root ganglia are practically always involved by lesions similar to those in the cord itself, and in experimental pathology this is the first step in the process. The terminal stage in the pathological changes is represented by neuroglia tissue, which is analogous to fibrosis and scar tissue in other organs, and the cause of shrinking in severe cases. The destruction of spinal cells of course results in loss of function, but as indicated in the case above unless the destruction has been most extensive, muscle function will be in part at least spontaneously restored, or may become so by the effect (through muscle training) of new connections between other motor cells and muscles.

We must remember that infantile paralysis is a general infection, which affects organs throughout the body, but in which we have to the present time been concerned only as to the presence or to the extent of paralysis. This is a natural point of view, but it is not impossible that further studies and later epidemics may alter the picture in this respect.

SYMPTOMATOLOGY AND DIAGNOSIS

The early symptoms of infantile paralysis are those of any acute infection. There is usually a prodromal stage of a few days, sometimes followed by a short latent period. The first thing observed by the careful parent on the part of the child is an increased irritability. There is usually an accompanying malaise, often a sore throat and a cough. The first subjective symptom of significance is that of muscular tenderness, or aching which may be transient for one, two or three days, accompanied usually by headache. At the end of this time there is a definite localized muscle tenderness, and sometimes a single point in the vertebral column where pain is produced by pressure. Reflexes at this time may pass from hyperactive or normal to greatly diminished or absent within a few hours. By

this time there is some resistance of the neck to anterior flexion, and there is stiffness of the spine. If the patient is raised by the shoulders the head drops back and cannot be easily raised. This sign, according to Gordon,² is of particular importance in that it is not consistent with other infections of the central nervous system. The Kernig, Babinski and Brudzinski signs are usually not demonstrated. It seems advisable in any patient presenting the above signs and symptoms, malaise, headache, fever, muscle tenderness and "the spine sign" that a lumbar puncture should be done without delay for the purpose of spinal fluid cell count, and for relieving pressure in the spinal canal. By this time in an infantile paralysis there will be an increase in cell count varying from 40 or 50 to 2,000 cells per cubic mm. These cells are usually polys at first, but change rapidly to the small mononuclear type. The spinal fluid is, of course, under some increase in pressure, is clear, and without demonstrable organisms.

MANAGEMENT OF CASES

When a tentative diagnosis of infantile paralysis is made it is imperative that careful management be instituted at once. It is wise that aseptic precautions be taken to avoid possible transmission of the disease. We must admit, however, that we know very little about either the incubation period or the infectiousness of this disease. It is especially wise that unnecessary handling and confusion be avoided. Everything possible should be done to conserve the energy and mental stability of the patient. Possible complications should be considered and especial care taken to avoid them. Proper ventilation should insure a sufficient oxygen supply without exposure to drafts or to chilling. If there is any difficulty in breathing, its source should be found and corrected. Often the irrigation of an unemptied bowel, and at the same time a slight elevation of the head of the bed will do wonders in making a patient comfortable. This, of course, will not suffice when there is a respiratory paralysis. Catheterization should be done in the occasional cases where it is indicated.

It is, I hope, needless to say that a supply of fluids sufficient to prevent dehydration and to promote elimination are essential. If necessary these fluids should be given as saline infusions. Food should be sufficient at least to prevent acidosis. This can, of course, be supplied by the intravenous administration of glucose. When the patient is willing and able to take it, a fairly generous mixed diet should be supplied.

In the medical management of infantile paralysis all indications should, of course, be met symptomatically. It is my belief that proper supportive care as outlined is of extreme importance. Besides the general measures there is one cardinal principle of treatment that has a universal application and unqualified acceptance. I refer to the principle of absolute immobilization of any part or parts that are affected. When time is a factor of importance, this can be accomplished quite easily and quickly, though not most effectively, by the use of pillow splints. It is most important that immobilization be effected in order to prevent stretching of weakened muscles, and presumably also in order to prevent the stimulation of motor cells by contact of any kind.

As soon as practicable all affected parts should have a well padded plaster of paris cast applied. After a few days these casts should be bivalved and the affected parts inspected at frequent intervals, in order to check the progress of the disease, and in order that the skin may be properly cared for.

The use of blood serum from convalescent cases in preparalytic infantile paralysis is controversial. The sum of all the evidence does not seem to be favorable to its use. There are, however, a number of very enthusiastic supporters of this agent. Until it has been definitely established to be of no value, I believe it should be used in every case where there is an early diagnosis of infantile paralysis. In connection with this it is commonly considered that adult whole blood is as of much value, if any, as that from known cases. It also appears that its administration is as beneficial given intramuscularly as when given intrave-

nously. Certainly there is no harm connected with it. The important thing, in my opinion, is to give enough. From 200 to 400 cc. of the whole blood should be given in two or three doses. The interval between the doses that I have used has been from 12 to 36 hours.

In summary, I wish to emphasize the need in this section of a different attitude towards infantile paralysis. The general practitioner and the men doing rural practice, not the specialists in the larger towns, have seen in the past and will probably continue to see the majority of the cases when in the acute stage. It is of paramount importance that the profession be prepared to recognize these cases at the earliest possible date. Every physician who treats children should be prepared to care for the patient in the acute stage of the illness. Every possible supportive measure should be used to maintain the general physical well-being and morale. The all important principal of immediate immobilization should be carried out in the home or the local hospital. Lastly, I hope it is not expecting too much to urge the early and generous use of whole adult blood in these cases. Special care that may be indicated may well come months afterward, and with, I believe, greater promise of success.

1. James A. Toomey and Harry A. Lipson—*American Journal of Diseases of Children*. Vol. 41, No. 6.

2. J. E. Gordon—*Journal American Medical Association*. Vol. 96, No. 13.

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Kondremul (plain) and Kondremul with Phenolphthalein Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that Kondremul (from chondrus and emulsion) is the coined, proprietary name, under which the E. L. Patch Company markets an emulsion stated to contain liquid petrolatum, 55 per cent, incorporated with Irish Moss (*Chondrus crispus*). Kondremul with phenolphthalein is stated to contain in addition 1.1 grain of phenolphthalein to each tablespoonful dose. The amounts of liquid petrolatum and of phenolphthalein are not declared on the labels or in the advertising submitted for the products. The Council was not convinced by the arguments submitted by the E. L. Patch Company to show that Kondremul is a more stable emulsion than others of its type, that it causes no "leakage" and that therefore the use of a coined name is justified. The Council declared Kondremul (plain) and Kondremul with Phenolphthalein unacceptable for New and Nonofficial Remedies because the amount of potent ingredient is not stated on the labels, because the claims for absence of "leakage" is unwarranted, and because the products have not sufficient originality to justify the use of the proprietary and uninforming name Kondremul (*Jour. A.M.A., August 5, 1933, p. 447*).

AN EVALUATION OF THE NORMAL*

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One of the most fascinating and intriguing facts of life, speaking from a social and esthetic point of view, is to be found in the seemingly endless variability and dissimilarity of things living. Life and change are synonymous terms, monotony is a product of abnormality rather than health. The subtle pattern which determines our individuality, always conceived and fashioned with meticulous care, the intricate mould, out of which we are cast, the infinitely detailed specifications for each and every unit of life, is used but a single time and then destroyed. Nature is ever prodigal and lavish in her architecture for she hates uniformity quite as much as she does a vacuum. No two human beings are strictly the same however much we may desire to pigeon hole or put them into identical compartments. A finger print identifies and defines a man quite as accurately as any serial number that appears on bank note or automobile. Life has ever evolved along these individualistic lines and quite certainly, we may be sure, it will continue to do so until the end of time.

Biologically and medically speaking, this fact is not in the least degree comforting for it introduces a very large measure of complexity and uncertainty into our scientific thinking. The fundamental truths of medical and biological science are infinitely more difficult to unravel because of the very large number of variables that are ever present. We speak of a normal individual when in reality there is no such single person or if there is, no one has yet been able to tell us exactly what his characteristics are.

In clinical medicine, normal people are assumed to be those that are in apparent good health—that is, they have no bothersome aches or pains and are able to go about their work in complete or comparative comfort. They have, in medical terminology, no presenting symptoms

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that require the services of a physician to correct or the tender mercies of a wife and indulgent family to cajole. It seems quite obvious that the great majority of so-called normal people cannot possibly be so considered. The fact is, I suspect, that rather than having a single standard of normality, there exists a normal zone or range for each one of us within which we function at our optimum and this optimum is an individual rather than collective property or attribute. Our clinically normal standards must today be looked upon as very crude and indefinite points of departure from which to measure abnormality. In no way can they be looked upon as fixed and invariable standards. The point at which pathology sets in in any disease process has not yet been determined with any real scientific accuracy. As a profession, we have been far too busy and interested in studying and recording the more obviously abnormal to make this possible. The normal has had no lure for us and until it has and until we devote ourselves as assiduously to its study as we now do to frank abnormality, we shall make but little, if any, progress in the more delicate and finer refinements of both diagnosis and therapy.

The large variability that exists in so-called normal values is strikingly brought out in the analysis of body fluids of healthy people. Instead of finding identical or very closely similar values for the various constituents present, one generally finds large and even striking variations obtaining. Normality in biology and medicine, as ordinarily considered, is a very wide avenue rather than a narrow lane. The glucose content in the blood of a healthy individual before breakfast varies from 85 to 125 mgm. per 100 cc. of blood. The cholesterol content from 140 to over 200 mgm. the fatty acids and other lipoids from some 250 to over 400 mgm. per 100 cc. of blood.

We are at present studying the oxidase content of normal and pathological blood as measured by the quantity of indophenol it produces. Here the variations within the normal differ as much as 300 per cent and yet for any single individual the oxidase content is remarkably constant,

both as to diurnal and seasonal variations as well as in variations due to food and activity.

On the Pacific coast, Osgood and Haskins found normal hemoglobin values in men varying from 13.44 to 18.23 gms. per 100 cc. of blood with an average value of 15.76 gms. The normal red cell count in men in this part of the United States varies from 4.41 to 6.27 million red cells per cubic millimeter with an average value of 5.39 million red cells. In New Orleans, Wintrobe and Miller found hemoglobin values in normal men to vary from 13.4 to 17.85 gms. per 100 cc. of blood with average values to 15.87 gms. The same authors found the normal erythrocyte count to vary from 4.68 to 7.35 million cells with an average value of 5.85 million cells. In Detroit, Haden found normal hemoglobin values in young men to vary from 14.02 to 17.17 gms. with average values of 15.83 gms. The normal red cell count varied from 4.52 to 5.62 million red cells with average values of 5.08 million cells per 100 cc. of blood.

Rabinowitz, working at the Montreal General Hospital in Canada, found the hemoglobin value of single healthy individuals to vary as much as 26 per cent during 24 hours. Out of 20 normal individuals examined between 8 a.m. and 6 p.m. on a single day, 12 showed diurnal variations of over 10 per cent in their hemoglobin content. Dreyer, Bezett, and Pierce, working at Oxford University in England, found hemoglobin values in men and animals varying as much as 30 per cent during a 24 hour period. Smith, on the other hand, working at Mount Holyoke College, found no significant diurnal variation either in hemoglobin or in red cell counts. From this it might be argued that at South Hadley, Mass., it does not matter what time of day a patient is examined for a possible anemia. In Montreal or Oxford, it may matter a great deal for at certain hours of the day a given individual may be perfectly normal, at others he may be definitely anemic and at still others actually supernormal so far as hemoglobin values are concerned.

Some 30 years Haldane in England, set up a so-called normal hemoglobin

standard which has found wide acceptance in this country since that time. This standard was based upon the oxygen content of the blood of some 14 apparently normal men. The oxygen content of these men varied from 17.0 to 20.4 cc. per 100 cc. of blood which translated into hemoglobin values gives a variation from 12.64 to 15.17 gms. The standard or 100 per cent value Haldane set at 18.5 cc. of oxygen for corresponding to 13.76 gms. of hemoglobin.

In 1916, Williamson, working at the University of Illinois in Chicago, determined the hemoglobin value of over 900 men, women and children and proposed as a standard or 100 per cent hemoglobin value 16.8 gms. of hemoglobin per 100 cc. of blood. In 1922, Haden proposed a hemoglobin standard of 15.6 gms. per 100 cc. of blood based on the hemoglobin value and red cell count of some 50 normal individuals. In 1931, Price-Jones found the average hemoglobin value of 100 healthy students in London to be 14.5 gms. corresponding to an oxygen capacity of 19.5 cc. per 100 cc. of blood. He proposed that this value be made a standard and substituted for the lower Haldane figure of 18.5 cc. of oxygen. Price-Jones also examined the blood of 20 medical students at Harvard University and found that their average hemoglobin content was some 7 per cent higher on the Haldane scale than medical students in England. The 100 per cent value of Price-Jones is equal to 105 per cent on the older Haldane scale.

That the numerous hemoglobin standards now in use leads to considerable confusion is quite apparent. A 100 per cent individual on the Haldane scale becomes definitely anemic when evaluated on the basis of the Williamson standard. If the new Price-Jones standard were to be adopted in this country, most healthy Americans would become super normal men so far as hemoglobin is concerned with values ranging as high as 115 and 120 per cent. It has been proposed that all 100 per cent standards be eliminated and that hemoglobin values be recorded only in grams per 100 cc. of blood. This will help somewhat in bringing order out

of the confusion we are in but the wide normal limits still remain and an average hemoglobin value will still have to be adopted in order to provide the nearest approach to clinical normality as that term is now used.

I have chosen examples representing variations within normal limits from the field of blood analysis because here fewer variables are probably involved than in such a body fluid as the urine and also because analytical methods in blood analysis have today been perfected to as great, or even greater extent, than in any other body fluid. The wide variations found in the data presented cannot be laid to faulty technique or poor selection for the work in each instance has been carefully checked by mature investigators. They represent real, rather than accidental, values and proclaim loudly the fact that in the present state of our knowledge there is no satisfactory normal value. What we now take for the normal, is an average figure representing a wide zone of variation and consisting of hundreds of individual variations. That these fluctuating values have a very real meaning even though at times they may be small seems very probable. We have recently come to appreciate the importance and value of extremely small amounts of various materials. The influence of tiny amounts of copper, manganese and other inorganic constituents in enhancing the oxidative capacity of iron in its organic combinations is now being appreciated. The importance and indispensable value of traces of vitamins in nutrition is today an accepted fact. We cannot ignore or dismiss the variations that obtain within the normal by the simple expedient of deriving a mean value from them and then deluding ourselves into thinking that this represents a true normality.

The facts are that there are two battle fronts and no man's land in humanity's endless struggle to maintain health. The quieter, but far more important of these has not yet been discovered or if it has its value has not been appreciated. It begins with the very first, and now altogether undetectable deviation from the

strictly normal and ends with the advent of the first symptom experienced by the patient. The second zone begins with the first appearance of definite symptom and ends with the death of the individual. As a profession, we now devote an overwhelmingly large proportion of our time and energies to the latter battle sector and practically none to the former. Victory in the less recognized zone is, to be sure, considerably less spectacular and yet for the patient, certainly far more important, for success here results in the conservation of the normal, in maintaining health rather than in regaining it, in keeping men and women free even from the beginning symptoms of disease, before recognizable pathology gets a foothold.

It is particularly in chronic disease that the time elapsing between the very first beginnings of abnormality and the first presenting symptoms may be of considerable duration. Let me illustrate this point by calling attention to the conditions that obtain in three well known disease entities—diabetes, pernicious anemia, and cancer.

In diabetes, although the exact etiology of this disease may not yet be certain, we now appreciate, quite fully, that the hormone insulin, produced chiefly by the islet tissue of the pancreas, is not furnished to the tissue juices in sufficient quantity to permit the normal oxidation of the digested and absorbed carbohydrate food stuffs and as a consequence glucose "spills" over into the urine after a certain concentration in the blood has been reached. No one really believes that this happens all at once, that is that the insulin producing tissue collapses all of a sudden and ceases to function in a normal manner. The appearance of a definite and persistent hyper-glycemia in a patient represents the end results and not the beginnings of months and probably years of abuse to certain endocrine tissue cells. The early detection of this abuse would in all probability lead automatically to the restoration of normal functioning and entirely prevent the appearance of frank and open disease. An intensive study of blood sugar levels, amounts of reducing sugars in the urine

and other, now unknown, variations within the normal, would certainly yield data that could be applied to the prevention of this disorder.

Pernicious anemia has within a comparatively few years been transferred from what seemed to amount virtually to a malignancy of the blood to a deficiency disease yielding definitely to comparatively simple therapeutic procedures. Here again it is very improbable that the so-called intrinsic heat labile fraction found in the gastric juice which reacts with the extrinsic factor found in food stuffs suddenly gives out and produces this disease. The probabilities are that the cells producing the intrinsic factor have been very gradually damaged for weeks or months, or even longer intervals of time. The task of detecting a deficiency in either the extrinsic or intrinsic factor in health is no greater than their appreciation after definite disease has set in but the results are tremendously more important. A more complete knowledge of the composition of normal gastric juice may in the future give us the data necessary to anticipate this condition rather than treat it.

The etiology of carcinoma still remains an unsolved mystery although it sometimes seems that the germ origin of cancer is making greater headway in explaining this condition than are metabolic or other theories. Two facts, however, stand out prominently in the production of this disease. They are chronic irritation and hereditary or other predisposition of the cells involved. A suitable "soil" seems to be very necessary for without it no amount of chronic irritation seems to produce malignancy. It seems certain that the prevention of cancer would be an easier matter to solve, than its cure, and yet remarkably little work has been done in determining the differences between so-called good or bad cancer "soil." The problem again becomes one of intensive study of what constitutes normal cell vitality. The elucidation of this problem must precede all real advice on the question of the prevention of cancer and cancer prevention should, it seems, receive as much, if not

more, study and consideration as its cure. Some time ago one of America's well known physicians when asked for advice on how to live long, promptly replied, "Why get yourself some long life parents!" One might equally well answer the question, "How can I avoid cancer?" by saying, "Get yourself some non-cancerous forebearers." These answers are true enough but as scientific and professional men we must blush at the state of ignorance which they reveal. If only one-half of our energies had been spent on study leading to correcting, and maintaining the normal rather than devoting it all to the cure of the abnormal our knowledge would be in a far more satisfactory state than it now is. However, not until the rank and file of the profession appreciate the importance of such study and demand research of this character will progress in the advance of maintaining the normal go forward with the vigor it should.

Victory in the second zone, that is after the first symptom has appeared can lead at best only to clinical cure of disease, for we are now dealing with definite lesion, evident pathology, frank and open disease, and our highest hopes and professional aspirations inevitably concern themselves with skill in detecting early symptoms with judgment in diagnosis and with success in treatment. Diagnostic and therapeutic skill are by no means undesirable professional accomplishments for we may always be certain that a large part of the population will neglect to take care of itself. But let us not forget that there is even greater and more urgent need for professional skill in matters that transcend repair. Let us, by all means, go on discovering and recording new symptom complexes, refining diagnosis, improving therapy, publishing each strange and record breaking departure within the abnormal but let us also earnestly, and in large numbers, set about to study the so-called normal individual. Only by an intensive and painstaking study of the slight deviations that obtain within the normal zone, can we ever hope to anticipate and correct disease rather than treat it. Professional advice that anticipates disease

must become, one of our finest specialties, the largest and most important of them all. It should eventually become the most lucrative source of income for the physician. I hope that we may some day see a postgraduate course in our medical schools based on an M.D. degree leading to the Degree of Doctor of Health and that to the men so-trained will be particularly intrusted the very important task of conserving the normal rather than treating the abnormal. The periodic examination now given annually or oftener to thousands of our citizens in this country is a good beginning along these lines although we can hardly say that the professions "stocks" a good periodic examination at the present time. The reason for this is the methods now used in physical and laboratory diagnosis are capable only of detecting an abnormality gross enough to be accompanied by or very shortly to produce definite symptoms in the patient. Inspection, percussion, palpation, auscultation, *x-ray*, and even laboratory examination of body fluids, now aim at no greater refinements than detecting the outer limits of the very broad avenue of normality. We shall sell the public many more periodic examinations when we know more about the normal than we now do, when we can evaluate more truly and interpret the variations that obtain within this zone.

To many medical men today it seems nothing less than sheer folly to suggest that the profession should change its century old habits of curing disease only and devote part of its time to conserving normal health. I am not forgetting that we have made tremendous strides in public health measures. Iodine therapy now so successfully used in preventing adolescent goitre has been a public blessing in many sections of our country. In acute contagious disease vaccine and other forms of therapy have contributed both to the conservation of health and the cure of disease. Speaking broadly, however, preventive medicine, as we know it today, concerns itself with community or public rather than with individual health, and does so mainly by keeping the highways and byways along which we travel free from large doses of germ life and

in this way prevents disease from gaining a foothold. This of course is very valuable and should be continued. Public health activity has, however, very little to do with the practice of the average physician; if anything it robs him of carrying on to the full the art and science to which he has devoted so many years in preparation. The conservation and maintenance of individual health is quite another matter. We are not at present informed or equipped to do much work along this line but once we are prepared our services will be far more in demand than they are at the present time, for we shall then include the entire population in our practice, we shall have not only an ailing minority but a healthy majority to treat and counsel. More time, more professional skill and more scientific counsel will be needed to maintain health than to cure disease, but we may feel certain that an enlightened public will willingly pay for this extra service. The individual physician will gain, not only financial remuneration but also in professional satisfaction in giving this type of service.

As a concluding remark I may perhaps be permitted to point out that it seems quite certain that if we, as a profession, do not more vigorously attack the problem of maintenance and conservation of normal health by way of systematic investigation and research but continue to devote ourselves single mindedly, or almost so, to the sole task of correcting the abnormal that this problem will find its champions elsewhere and its solution will go forward outside the ranks of the profession. The problems of health and disease are after all inextricably woven into each other and cannot be separately considered. Disease cannot be more adequately or comprehensively defined than as "negative health" and the paramount interest of all medical endeavor must always envision and contain the ideal of health as its controlling motive. The profession of medicine should furnish not only the scientific leadership but maintain the permanent custody of both the problems of health and of disease. It must indeed do this or lose the high

prestige which it now enjoys. As our scientific knowledge advances, as public health measures increase in extent and efficiency, disease will inevitably decrease in frequency and importance. If our sole professional concern in the future is placed in the etiology and therapeutics of disease processes, we can only look forward to a slow and lingering professional *decline*. With conservation and maintenance of health as guiding principles the profession will gird itself with a positive ideal, broad in its scope, valuable in its content, and well nigh inexhaustable in the amount of service required.

And finally if there be any glory and honor and distinction due the profession for unselfish service in subduing and conquering the "spectre of disease" how much greater will be the thanks and plaudits of mankind for every practical and scientific advance that has for its goal the conservation of the normal to the end that there need be no restoration or repair of the abnormal.

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The Western Medical Corporation.—The Western Medical Corporation is a later name for what was earlier known as the Western Medical Association. The concern sells on the mail-order plan what the public is led to believe is a cure for epilepsy. For some years it did business from 137-143 W. 62nd St., Chicago; recently (June, 1933) it moved to 415-423 W. 39th St., Chicago. The Western Medical Association was the subject of an article in *The Journal*, January 28, 1922. An important part of the advertising ballyhoo of the Western Medical Corporation is a six-page autobiographical puff of Harry L. James, M.D., vice president of the corporation and "directing physician." Dr. James would have the public believe that he is peculiarly well qualified to treat cases of epilepsy. In his autobiography, Dr. James says to the prospective victim that he is sending the advertising matter to him "with the thought that perhaps there is no physician near you who is thoroughly acquainted with the most up-to-date methods of treating epilepsy attacks." In the first article published on this concern the A.M.A. Chemical Laboratory reported that the tablets furnished at that time came in three boxes labeled, respectively, A, B and C. Box A was found to contain what were essentially one grain tablets of phenobarbital (luminal). Box B contained tablets that had the general characteristics of those unscientific mixtures of pepsin, pancreatin, etc., vaguely described as "digestive tablets." Box C contained a laxative—tablets that responded to tests for emodin-bearing drugs and aloin. In other words, this treatment is essentially the administration of phenobarbital to persons Dr. James never sees and sent out in a secret mixture on the mail-order plan for the self-treatment of a serious condition—epilepsy. (*Jour. A.M.A.*, August 5, 1933, p. 463).

URINARY CALCULI*

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Dewey, Oklahoma

I have chosen this subject because of the broadness of its scope. It is not my intention to deal with it in all its phases, but I shall try to bring out some of the salient points as I have met them and call your attention to the work of some of our leading urologists.

The etiology of stone formation still remains a question for study. Bumpus states that formation of urinary calculi has been attributed to whatever phase of scientific endeavor was at the time popular. This has been and is even yet true. There seems to be no one factor which can be said to be the causative one. The four most commonly accepted causes of stone formation, no one of which can produce them alone are: (1) a colloidal dispersion; (2) a urinary stasis; (3) a vitamin deficiency, and (4) bacterial. The fourth or bacterial factor has not been proven conclusively to be in any way a causative factor yet it is known that distant foci as bad tonsils, bad teeth, infected sinuses, and possibly many other foci of infection do have a decided effect on the progress of many of the urinary affections. So far I have not discovered any record of a clump of bacteria having been found that could be called a nucleus of a stone, as is said to be found at times in the formation of biliary calculi. When two or more of these factors are at work at the same time we get stone formation which may be of very short duration.

A patient was operated and a small stone removed from the uretero-pelvic junction. Some days later a roentgenogram was made, everything was clear and no sign of stone could be seen. Some three months later there was apparent trouble and another x-ray was made. This one showed a stone much larger than the one removed only a short time before. Hence, we see that stones may be of some considerable size and yet be of rather recent formation.

The term colloidal dispersion is a rather technical term and will have to have some degree of explanation: *First*: Crystalloids which normally go into a molecular solution in water, may under certain conditions, exist suspended in a fluid as small particles of varying sizes, yet always larger than a molecule. This state of solution in larger particles than molecules is the so-called colloidal dispersion and is always due to some outside influence. *Second*: True colloids are those which always exist in fluids in a state of colloidal dispersion and are never in a state of molecular solution. This quality is inherent in the substances and may be altered by external influences but is not dependent on their action.

It has been determined that some of the urinary constituents are normally in a state of colloidal suspension. This seems to be due to the protective action of the true colloids of the urine. These are present in all urines and are not albuminous. The more soluble the constituents of the urine the less active are these colloids. In view of these conditions as have been worked out it seems that when a solution containing a crystalloid urinary constituent and a very small amount of a colloid are precipitated simultaneously a mass is formed. The colloid forms a sort of clot and holds the crystalloids within its make-up.

If a stone should be formed of a true agglutination of a temporary colloid, then there should be the possibility of so diluting and treating the urine in such a way as to dissolve these stones. Further comment along these lines is not of much value to the general practitioner, but must be worked out by research workers.

The age at which stone formation may occur appears to extend from the cradle to the grave, but not in the same ratio along the way. In a series of 6,000 cases there were 2,334 below the age of 10 years; 1,079, 10 to 20 years; 513 from 20 to 30; 353 from 30 to 40; then begins a slight rise in occurrence as we see 422 from 40 to 50 years; 536 from 50 to 60; 587 from 60 to 70; then a decline to 201

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from 70 to 80 years, and only 17 from 80 to 90. Of course these last figures are influenced by the fact that there are not so many persons who ever reach these ages. Because of imbalanced diet and the absolute lack of proper diet we see so much of this trouble among the children of the poor. Also we see it among the older people especially in men who eat much and do not take a proper amount of exercise. Stones among men are about as common among the wealthy as among the poor. Urinary stasis from the senile hypertrophy of the elderly man with its consequent accompanying cystitis is prone to stone formation.

Oxalate of lime stones are often seen in those who eat a great deal of fruits, especially among the inhabitants of southern California and in Florida where many oranges and other tropical or semi-tropical fruits are grown. Phosphatic stones are most commonly seen as incrustations on foreign bodies as in the bladder. Residual urine as from an enlarged prostate or strictured urethra favors alkalinity of the urine and thus predisposes to stone formation. Small crystals or the so-called urinary gravel may be held in the bladder and thus become nuclei for the growth of vesicle calculi.

The majority of urinary calculi have their beginning in the kidney pelvis or the calices. Because of more or less irritation caused by these stones, even though they be very, very small, there soon becomes an infected condition through the blood stream, the lymphatics, or possibly by retrograde ascension along the ureter. Rosenow reports experiments made by taking material from the urine of patients suffering with urinary calculi and the usual accompanying infection and implanting it into the teeth of healthy animals and producing stone formation in the kidneys of the animals. Hence we can see the necessity of looking well to the eradication of all areas of focal infection so far as is possible.

Taking into consideration the anatomy of the ureter there are three sites of lessened caliber along its course at which points arrest may occur in the descent of

the stone in its passage to or toward the bladder: (1) The narrowing of the lumen about an inch and one-half from the kidney; (2) near the crest of the ilium where the ureter crosses the iliac vessels, and (3) at the uretero-cystic junction.

SYMPTOMATOLOGY

In calculi within the calices or pelvis of the kidney the pain is usually well localized to one side as the great majority of cases are unilateral. The most important symptom is *pain*. This may be a more or less colicky pain or it may be a constant backache. It is most commonly felt in the loin or region between the last rib and the crest of the ilium. The sharper pains may radiate to the groin, into the genital region as to the end of the penis in the male and into the labia in the female. It may extend down the leg to the knee and even on down into the foot. Sudden movements or over-exertion may bring on an attack. In some cases the pain may be felt over the entire lower quadrant, in the stomach, and even radiate to the opposite side and the patient complain of severe pain on the well side and none in the affected side. This was demonstrated clearly in my office only recently in a patient complaining of a right-sided pleurisy when the *x-ray* showed a typical stone on the left.

These are the painful conditions which are sometimes mistaken for pleurisy, appendicitis, biliary colic, acute indigestion, and even salpingitis. The typical pains are about as follows: Sudden severe pain in the region of the kidney, very shortly extending forward and downward to the groin, genitalia, and even down the leg. I have known the testicle to be drawn up into the inguinal canal. I saw a lady once whose most severe pain was in the heel. Nausea and vomiting are almost always the rule, hence the often diagnosed gastric trouble. The crises of renal colic are not always due to calculi; they may follow even vesicle catheterization, and more often ureteral catheterization, as did a case of mine only a few months ago. A patient was referred to me for cystoscopic examination and a pyelogram. The cystoscopic was done and a flat *x-ray* made preparatory to the pye-

logram. Our picture showed a fracture of the twelfth rib and the transverse processes, on that side, of the upper two lumbar vertebrae. This man had very severe colicky pains and cystitis following the cystoscopy. Let me say right here that it is always well to be as careful in even passing the usual rubber catheters and have all things as nearly aseptic as possible for a cystitis may develop even with the most careful managed procedure.

Hematuria is another symptom of stone somewhere along the urinary tract. It may not always mean there is definitely a stone present as it may be from trauma from other causes. This hemorrhage may be continuous or it may be intermittent; it may be so profuse as to render the urine to appear to the naked eye as if it were all blood, yet it may be there are so few red cells as to not be noticed except through use of the microscope. The passage of gravel or the so-called kidney sand is often a symptom. Very small stones are formed in the kidney and are expelled before they become of any particularly appreciable size; however, these may be rather disagreeable in their passage because of the possible roughened edges.

Some small stones may cause much pain and colic for many weeks before they are finally passed into the bladder; some are never passed and require surgical interference for their removal. If a stone in its passage toward the bladder becomes impacted in the ureter and completely obstructs the outflow of urine from the kidney on that side there may be complete destruction of that kidney with a reflex anuria in the other kidney; consequently, a complete anuria with consequent uremia and death of the patient may result. On the other hand if the blocking is but partial there may be a hydronephrosis, hydroureter, a pyelitis, a pyelonephritis, or most any other infective condition of the kidney. Infection is a frequent complication with urinary calculi. Usually it comes on late in the course of the trouble but it may be early and even before the stone formation, or there may even be an infected condition

such as a pyelitis without stone. We may also have a pyuria and no fever or other evidence of sepsis.

Stones passing toward the bladder are most often arrested for longest periods of time at the uretero-cystic junction and when here are most apt to call for surgical removal. This may be done by use of ureteral instruments through the cystoscope, yet at times these require a major operation. If the blocking is complete or so much obstructs the flow of urine that the kidney is seen to be suffering distention and lack of ability to function properly then a major operation extra-peritoneally must be done at an early stage.

The diagnosis of ureteral stone seems to give most trouble. The same symptoms—renal colic, nausea and vomiting, possible hematuria, chills and fever, may be caused by many other conditions such as kinking of the ureter, ptosis of the kidney, ureteral stricture, aberrant blood vessel causing extra-ureteral pressure as might also tumors. As I have stated previously, a large percentage of these cases have already been operated for appendicitis, ovarian or tubal troubles, and even for gallbladder affections. They have also been mistaken for pleurisy.

To cinch the diagnosis of ureteral stone the cystoscope and *x-ray* are absolutely necessary and indispensable. Here we must be careful again for in a very small percentage of cases we may encounter a uric acid stone which does not cast a shadow or we may mistake calcified glands or phleboliths for stone; usually the lack of proximity to the opaque catheter will rule these out. If we have other indication of stone and no shadow it is well to examine carefully segregated specimens of urine for uric acid crystals.

The effects of an ureteral stone may be varied. If the stone is not so large as to completely obstruct the flow of urine, it may be the cause of a hydronephrosis, and consequent destruction of kidney tissue. If it does completely shut off the passage of urine from that kidney it soon causes destruction of the kidney because of the consequent unilateral anuria which may and has been known to cause an

acute total anuria with subsequent death when the opposite kidney was not previously affected. Sometimes stones become imbedded in the ureteral wall and lie seemingly dormant for some weeks or months and give no particular trouble other than causing the development of a protective tissue which when the stone finally becomes dislodged and removed tends to a cicatricial contraction which may cause stricture.

The treatment of stone in the urinary tract may consist of one or all of three different steps. First, is the expectant type of treatment. This consists of drinking large quantities of water and thus helping nature to flush out the offending stone. When by *x-ray* examination, we know there are stones in the kidney either in the pelvis or calices, we may as is often done by Bransford Lewis of St. Louis, use a sort of succussion procedure and thus get the stone or stones to enter the ureter and sooner or later the bladder and finally be expelled per urethram.

Second, we may greatly assist by the use of the cystoscope and ureteral instrumentation. As much as 80 to 90 per cent of all stones may be made to pass by these two methods. Ureteral catheters of varying sizes such as the Garcea, some of the various stone dislodgers, or even the mechanical dilator of Bransford Lewis. At times it is well to leave one or more catheters in the ureter for even as much as 48 hours. This method gives quickest relief from pain and secures free drainage from the kidney, allows of pelvic lavage and the instillation of lubricants about the stone to facilitate its passage. There are many instruments on the market for grasping and removing or even crushing a stone in the ureter, but these do not appeal to me. It would seem logical that the possible damage capable of being done to the ureter might far outweigh the occasional removal or crushing of a stone, when, as stated before, 80 to 90 per cent may be made to pass.

Third, we may have to resort to major surgical means. This is always done through extraperitoneal incisions save at

times when the stone may be firmly impacted within the cystic wall and cannot be dislodged. It may become necessary to make an incision in the ureteral meatus and thus at times enable us to extract the stone through the cystoscope, but in all such procedures one must be mindful of the fact we may encounter severe hemorrhage.

CONCLUSIONS

(1) A correct diagnosis of urinary calculi may be made in about 98 per cent of cases provided one uses the latest methods.

(2) Approximately 80 to 90 per cent of all stones may be made to pass by use of the first two procedures mentioned above.

(3) The too frequent or indiscriminate use of metal instruments in the ureter is not only not advised but is condemned as being prolific of much possible harm.

(4) Early operation for impacted stones in the ureter which, after reasonable cystoscopic manipulations have failed to cause any dislodgment or free drainage from the kidney on that side, or a stone in a solitary ureter, or in a person who tolerates the cystoscopic manipulations badly.

(5) The site of operation depends upon the point of arrest of the stone, but all operative procedures are done if possible extraperitoneally.

(6) The idea of the bare possibility of a solvent for at least some of the stone formations should be kept in mind.

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Intravenous Injections—Loeser's Products.—Advertising which has been distributed on the intravenous use of hydrochloric acid is the commercial propaganda of the Loeser Laboratory, whose exploitation of unscientific intravenous medicaments has been previously noted. In the "literature" on the intravenous use of hydrochloric acid, the testimonials for the use of the acid mention nearly all the disorders known to medicine as being benefited, without adequate evidence of any kind. The alleged relationship between causes of disease and therapeutic effects is an earmark of pure invention. Contrary to the implications in this propaganda, the intravenous use of hydrochloric acid is far from harmless: the acidity of the solution advocated is more than a million times that of the blood. Physicians should unreservedly condemn the advocacy of such crude and dangerous experimentation. (Jour. A.M.A., August 12, 1933, p. 544.)

GEOGRAPHIC AND EXPERIMENTAL STUDIES ON THE ETIOLOGY OF GOITER

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In most textbooks, endemic goiter is treated as a morphological and physiological entity which is preeminently associated with mountainous regions, and the thyroid function in endemic goiter—if disturbed at all—is regarded as deficient, causing more or less severe symptoms of hypothyroidism or even cretinism. This dogmatic conception of endemic goiter still predominated at the International Goiter Conference in Bern, 1927; the principal speakers pointed out that hyperthyroidism and Graves' disease have nothing to do with endemic goiter and must not enter into the discussion.

Only few investigators—Feldmann, Josselin de Jong and Holst—described at this conference an entirely different type of endemic goiter which they had observed on the North German coast, in Holland and Norway. Goiters of these lowlands were rich in colloid, in contradistinction to the mountainous forms which have very small acini with only scant colloid. In level regions, congenital goiter was not observed, while in Switzerland and other regions of severe endemicity, most children are born with considerably enlarged thyroids. Furthermore, cretinism did not occur in the northern parts of Europe; on the contrary, their goiter patients often presented signs of an increased thyroid function, namely toxic and exophthalmic goiter.

PECULIARITIES OF THE NORTH AMERICAN GOITER

There is a deplorable lack of information about the character of goiter in the different parts of North America. From my own observations in Kansas and from the few data which are available from other districts of the United States, it seems that the morphology and physiology of the North American goiter is rather uniform and does not vary ac-

cording to the different localities, as does the European goiter. The goiters which are seen in Kansas resemble very much the ones typical for European level regions and they are entirely different from the classical endemic goiter, as observed in Switzerland, in Himalyan India or the Pyrenees.

From the morphological point of view, the greatest difference between the goiter in plains and that of mountainous countries lies in the size of the acini and the colloid content. In high altitudes, with a great incidence of goiter, the diffuse parenchymatous goiters are very common in children and at puberty. In level regions, however, they are so rare that most of the American classifications do not even list them. Also in goitrous areas of the mountains, the diffuse parenchymatous goiter is rarely seen after the second decade of life and is replaced by the nodular, parenchymatous goiter, the so-called fetal adenoma. In 76 per cent of the surgical material at Bern, Switzerland, nodular, parenchymatous goiter was found by Woelz, and Wydler states that 94 of his 104 cretin goiters showed this structure. The reverse incidence is seen in level regions with only slight frequency of goiter. Among the surgical specimens at Wichita only 13.9 per cent of the goiters were parenchymatous. This is still higher than in other areas of the United States; in Ann Arbor, Michigan, the incidence is 6.8 per cent. The nodular parenchymatous goiter is so rare in North America that Hertzler wants to separate it from the common goiter and proposes for it the term "mixed tumor." This standpoint is limited to the goiter forms as seen in level countries and is not justified from a world-wide point of view of geographic pathology, because the so-called fetal adenoma constitutes actually the most frequent type of endemic goiter in mountainous regions.

And no more justifiable is the opposite conception of goiter students who, living in a severe endemic area, regard exophthalmic goiter as a disease without any relation to simple goiter. By extensive studies, not only of American goiters, but also of many glands from European patients, I am forced to believe that ex-

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ophthalmic goiter develops usually in a diffuse colloid goiter. In almost every instance of exophthalmic goiter, histological study will reveal large colloid-filled acini. This indicates, that diffuse colloid goiter and exophthalmic goiter are nearly related and that one can easily change into the other. In level regions, the diffuse colloid goiter, which is physiological in puberty, disappears as a rule spontaneously after the twenty-fifth year of life; but when it persists, it is very often accompanied by symptoms of hyperthyroidism. The anatomical fact that most exophthalmic goiters develop on the basis of colloid-goiter, explains very well why Graves' disease occurs so frequently in the same locality where colloid goiter is the prevailing type of endemic goiter, and why in mountainous regions, where colloid goiter is very rare as compared with the parenchymatous goiter, exophthalmic and toxic goiter are the exception.

A thorough knowledge of the variations in structure and functional disturbance of goiter according to the locality will necessarily also influence our conception of the etiology of this world-wide disease.

STUDIES ON THE ETIOLOGY OF GOITER

There have been many theories as to the cause of goiter most of which are only of historic value. The majority of the European authorities at the International Goiter Conference in Bern, were advocates of the infectious theory of goiter, while in this country most investigators regard the lack of iodine as the exciting cause of simple goiter. McClendon and Hathaway determined the iodine content of food and water from goitrous and non-goitrous areas and showed that there is little iodine in the vegetables and the water of those parts of the country in which goiter is a serious problem. From their studies of mammalian goiter, Marine and Lenhart arrived at the conclusion, that the thyroid gland undergoes hyperplasia whenever its iodine content falls below 0.1 per cent and that the therapeutic effect of iodine is the result of restoring to the thyroid gland the normal amount of iodine.

The iodine deficiency theory of goiter is not new. More than 80 years ago, a French scientist, Chatin, showed there was a low iodine content in soil and water in districts of endemic goiter, but his chemical studies were discredited and his theory was abandoned until Baumann discovered iodine as a normal constituent of the thyroid. During the past 20 years, extensive analyses of food, soil and water for iodine have been made with a much improved technic. While many confirm Chatin's original claim, there are as many exceptions and contradictions. Liek reported that on the German coast goiter is not uncommon in spite of a very high iodine content in the local food and water and, on the other hand, Pfister of Dutch India and McCarrison of the Himalayan regions, emphasize that there are areas with a very low iodine supply which are entirely free from goiter.

If we consider that most of our knowledge about other deficiency diseases is based on feeding experiments, it appears strange, that for the iodine deficiency theory of goiter a direct experimental proof has never been attempted. In the summer months of 1929 and again in 1932, I carried out experiments on white rats, by feeding them an almost completely iodine-free diet. Not once was I able to produce goiter in these animals which are known to acquire hyperplasia of the thyroid very readily, if kept in goitrous regions (Table 1). My negative results were confirmed recently by Hibbard of New York and by Jackson of Minneapolis. Not only did the strictest iodine-free diet fail to cause hyperplasia, but the thyroid gland seemed even to undergo atrophy the severity of which was in inverse proportion to the amount of iodine taken and in direct proportion to the length of time the feeding experiments were continued.

Without questioning the important role that iodine may play in the prevention of goiter, I believe that the essential cause of goiter is a positive agent. In the middle of the last century, McClelland and Bouchardat advanced the theory that an excess of calcium in drinking water may cause endemic goiter. There

TABLE 1

Diet	Number of Animals	Size of Thyroid Lobes	Histological Structure of Thyroid Gland of representative experimental animal
GROUP I. Barley and distilled water for 98 days	6	R:3.5x1.5x2mm. L:3 x1.5x2mm.	Average diameter of acini: 36 micron. Many wide lumina. Abundant amount of colloid. Thick consistency, large vacuoles. Height of epithelium: 6 micron. Absent hyperemia.
GROUP II. Barley and calcium-rich water for 98 days	5	R: 5x1.5x2mm. L: 4x1.5x2mm.	Average diameter of acini: 20 micron. Few wide lumina. Small amount of colloid in larger acini. Many vacuoles. Many empty acini. Height of epithelium: 12 micron. Marked hyperemia.
GROUP III. Calcium-rich water, otherwise well balanced diet for 98 days	11	R: 5x1.5x3mm. L: 5x1.5x2.5mm.	Average diameter of acini: 50 micron. Very many wide lumina. Abundant amount of colloid, well stained. Few vacuoles. Height of epithelium: 10 micron. Moderate hyperemia.

are recorded instances of goiter endemicity on one bank of a stream and its absence on the other, corresponding to limestone and its lack. With an iodine-free diet and drinking water, containing 2 per cent calcium chlorid I was able to produce distinct goiters in white rats after a period of 98 days (Table 1). By giving calcium together with iodine-rich food, the thyroid glands of my experimental animals were also definitely enlarged. But in this series (Table 1) they were of the colloid type, while after calcium-rich and iodine-poor diet the artificial goiters were of the hyperplastic type with very little colloid.

CONCLUSIONS

From these experiments, it seems fair to conclude that iodine-insufficiency by itself is not the fundamental cause of goiter, but that a positive agent is responsible for its development. This positive agent is perhaps not a single specific factor; there may be other causative factors besides calcium excess. Four years ago, Chesney and Webster produced large goiters in rabbits by cabbage feeding, independent of the iodine content of the food. Only the conception of a positive goitrogenic agent can explain the fact that endemic goiter may be present in localities rich in iodine and, on the other hand, absent in regions with lack of iodine.

The iodine deficiency theory does not explain the variations in structure and function of goiter in different regions.

After feeding the animals a calcium rich diet, I produced goiters which had a different structure according to the different iodine content of the food. The artificial goiters were poor in colloid after iodine-free diet, and colloid-rich when the diet contained much iodine. The essential cause of these experimental goiters was, however, the same in both series, namely excess of calcium. From these experiments, it seems very probable, that also the differences in the character of endemic goiter in different regions may be due to differences in the iodine content of the food, the positive etiologic factor being the same and world-wide.

The present-day tendency is—according to McCarrison—to consider goiters too much from the narrow point of view of iodine, as might a mechanic who considered the efficiency of his engine solely from the point of view of lubrication. In my opinion, the etiology of goiter is a much too complicated problem, to be solved by the iodine deficiency theory.

SUMMARY

The few statistical data available for North America indicate that the goiter type in this country is very different from that in mountainous regions of high endemicity. The North American goiter resembles the goiter forms as found in European level regions.

The most common structure of goiter in the United States is the diffuse and nodular colloid goiter. Thyrotoxicosis ac-

companies goiter in North America more frequently than in any other country yet studied. This is probably closely related to the high incidence of colloid goiter.

The iodine deficiency theory fails to explain the variations in structure and functional disturbance of goiter in different regions.

In animal experiments, an iodine-poor diet does not produce goiter.

Drinking water, rich in calcium, produces definite hyperplasia of the thyroid gland in white rats.

The structure and the colloid content of these artificial goiters depends on the iodine content of the calcium-rich diet.

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A.L.A.—“A.L.A.” is the unscientific proprietary name for a local anesthetic which is being exploited to the medical profession by Sutliff & Case Company, Inc., Peoria, Ill. According to the advertising the product has the following formula: P-Aminobenzoic Acid Ethylester 3 per cent; Phenmethylol 5 per cent; Ether 10 per cent; Olive Oil 82 per cent. If the firm had wanted to be absolutely candid about the composition of its product it would not have been necessary to hide the composition under the noninforming initials A.L.A. Naturally, the product does not stand accepted by the Council on Pharmacy and Chemistry. (Jour. A.M.A., August 12, 1933, p. 547.)

Rule Governing Advertising to Physicians.—The Committee on Foods reports that the section “Rules Governing Package Label and Advertising” of its rules and regulations has been amended to state that advertising intended solely for the physician may include disease names and information supported by sufficient evidence regarding the special use of foods in the diet of the sick, but that such advertising shall not treat foods as medicines or attempt to transform foods into therapeutic agents. (Jour. A.M.A., August 19, 1933, p. 605.)

THE SIGNIFICANCE OF NERVOUSNESS*

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The term “nervousness” or “nervous breakdown”—like the traditional Mother Hubbard—covers everything and fails to touch a single point. It is a purely physical term, used to describe a mental condition. *Strictly speaking, there is no such thing as a nervous breakdown.* The condition described is a personality disorder based on either a mental breakdown or a character breakdown, more often the latter than the former. It is nothing which should be diagnosed lightly and on the patient's part, it is nothing he should be proud to talk about. Yet the difficulties of nine-tenths of our patients coming here are explained as “nervous breakdowns.” Why do physicians and patients alike perpetuate the use of a term which means nothing?

The Christian name for this condition, if there can be a Christian name for a thing which is truly devilish, is psychoneurosis. The psychoneuroses, more than any mental ills, have the right to be classified under the grouping of the functional mental disorders. Like love and religion—they are primarily “a state of mind.” They are not discovered by the microscope, or identified by some chemical test. Although many physical signs can be demonstrated and instances noted of disturbed function, yet the etiology is in the realm of the psychological rather than the physical. Like the functional psychoses these are personality or character disorders. Both are based upon a failure of adaptation. The precox or manic depressive patient is unable to *adjust* himself to his *environment*. He fails to see things as they really are, his sense perceptions are unreal and distorted; he experiences hallucinations.

The psychoneurotic, on the other hand, sees things correctly but is unable to effect *adjustment* with *himself*. The psychotic individual is fighting a foe which is an *invading* force and the battle is

*Read before the meeting of the Franklin County Medical Society at Osawatomie, June 28, 1933.

either lost or won. The psychoneurotic is carrying on a civil war, an intra-psychic conflict, a war which never has a decisive battle unless help is brought from without. The forces engaged are always *emotions*. They may paralyze any function of the body, poison secretions, send their deadly gas into the mind, take prisoner the will.

The psychoneuroses (the battle-ground of the emotions) are recognized in four different types: The hysterical and neurasthenic refer especially to the *physical*; The psychasthenic and anxiety type are directed toward the *mental*. The hysterical type is a condition in which the warring emotions express themselves through the *body* in an *objective* way. The neurasthenic type is an expression of the warring emotions through the *body* in a *subjective* way. The psychasthenic type is an expression of the emotions through the *mind* in an *objective* way. The anxiety type is an expression of the emotions through the *mind* in a *subjective* way. These comprise the several types seen in general practice and make up 45 per cent of all people and at least 75 per cent of the patients of the general practitioner.

Now as to the symptoms of the different types of psychoneurosis: The hysterical type manifests his emotional conflict by a predominance of *objective physical signs*. Contrary to ordinary belief, the hysteric is not one who is always complaining. His symptoms are objective and anyone can see for himself. He has a paralyzed limb, a contracture, an area of anaesthesia, an aphonia or an amnesia. The hysteric solves his emotional conflict by converting it into a physical thing through his autonomic nervous system and then running away and forgetting it like the patient who runs up a bill, changes doctors, and erases the original account from his mind.

The *neurasthenic* manifests his emotional conflict by a predominance of *subjective physical symptoms*. The hysteric says little and shows much; the neurasthenic talks continuously, but shows no objective signs. He has to talk

for there is no other evidence. His principal symptoms are physical fatigability, irritability, hypochondrical ideas and indecision. The hysteric is a coward and runs away from his conflict. The neurasthenic puts up a fight but is always in retreat. He is like the patient whose account is always getting larger and who is unable to make any payments whatever.

The *psychasthenic* manifests his emotional conflict by a predominance of *objective mental symptoms* such as impulses, compulsions, obsessions, and phobias. What the hysteric is in a physical sense, the psychasthenic is in the mental sphere. The hysterical patient shows a paralyzed arm; the psychasthenic, a paralyzed will, one exhibits a contracture, the other an obsession.

The anxiety type manifests his emotional conflict in a predominance of *subjective mental symptoms*. He is the mental neurasthenic. He manifests mental fatigability, irritability, anxiety and fear. Like the physical neurasthenic, his difficulty is generally due to emotional disturbance arising from abnormalities in the sexual sphere.

What then is the cause of this civil war, this internal conflict, which manifests itself in so many diverse ways? We have said they were intrapsychic conflicts, the battling of instincts, inhibitions and emotions. The primal instincts of self-preservation and self-perpetuation, the emotions attendant on each and the dictates of an artificial and complicated social environment lay the ground work for this battle of the emotions. The ability to work and solve the problems of life requires a perfectly integrated personality, the ability to see a goal for one's life and the ability to adapt oneself to one's own environment. Failure to attain this goal may precipitate the emotional conflict.

Two factors enter into this battle of emotions and instincts for survival: First, the natural physical and mental equipment of the individual; second, the complexities of his environment. It can readily be seen that individuals with defective or delicate natural equipment might break under the ordinary strain of living. On the other hand, one of more

than ordinary mental and physical ability might be overcome by increasing the complexities of his situation. In the World War many who were able to meet the ordinary demands of business and society were unable to meet the exigencies of war and so developed a psychoneurosis. Other individuals in business, although capable of rendering a high order of service, might in another position prove failures due to complexities of environment.

Psychoneuroses are the results of unsolved problems in which instincts and emotions are the factors. *Conflicts which are settled do not cause neuroses*; full payment is made and the account closed. The debt which causes the emotional war is either one which is not acknowledged, one which we are unable to meet through lack of resources, or one which, like the international war debts, was acquired at a time of emergency and later repudiated.

The cause of "nervous breakdown" is often attributed to overwork. This is a mistake. Work, mental or physical, has never caused a neurosis any more than working in a bank would cause one to become an embezzler. It means that the individual has a flaw, a "yellow streak" and that the phenomena shown indicates a breakdown in character, a weakening of personality (which is the expression of character) rather than a condition in the sphere of the physical.

—R—

Oyloff Dry Shampoo.—In an advertisement published in the *Woman's Home Companion* for January, 1933, the following claims are made for "Oyloff Dry Shampoo" put out by the Godefroy Manufacturing Company of St. Louis: "It's amazing how Oyloff Dry Shampoo removes all oil and dirt, cleans the scalp and reveals the silky luster, beauty and romance of your hair;" "Just apply Oyloff, let it dry, then brush thoroughly. You can see the oil and dirt come tumbling out;" "Try it once and you'll thrill over it, too." A bottle of Oyloff was purchased on the open market and \$1.05 had to be paid for it. It was turned over to the A.M.A. Chemical Laboratory with the request that it be analyzed. From the chemists' report we learn that this "amazing" product that reveals the "romance of your hair" and that will "thrill" you is, essentially, a pinch of salt in five ounces of water. Paying \$1.05 for five ounces of salt water would seem, under present economic conditions, to furnish a text for a discussion on certain phases of modern business. (*Jour. A.M.A.*, July 29, 1933, p. 386).

CASE REPORT

Acetanilid Poisoning—Result of Self-Medication

FRED J. McEWEN, M.D.
Wichita, Kansas

This case is presented as an example of self-prescribing of dangerous drugs.

One morning about the middle of February an emaciated, cadaverous-looking male, age 65 and white, presented himself at the office for examination. He complained of exhaustion, shortness of breath on exertion, palpitation and chronic headaches. He had had headaches, dull in character and frontal in location with onset early in the morning just after arising, for the past four or five years. About three years ago he discovered that he obtained relief by taking one of Dr. Miles' Anti-Pain pills. By two years ago it became necessary to repeat with a second tablet daily; during the last year he had taken three a day to obtain relief from his headache. During the past year he had gradually noticed failing strength and that "the heart beat hard and more rapid," accompanied by increasing shortness of breath on exertion. He had experienced considerable trouble with "gas on the stomach" shortly after eating and had avoided full meals. He had been a heavy smoker for several years. The past and family histories were essentially negative.

PHYSICAL EXAMINATION

The patient weighed 113½ pounds; height 67 inches; temperature 98°; blood pressure 170/100; pulse 80 and regular. He was moderately nervous. His skin was cold and clammy. The lips, cheeks, mucous membranes and extremities were cyanosed. The heart: Normal size; rhythm regular; sounds very soft with a soft systolic murmur heard best to the right of the sternum in the second interspace but also faintly heard at the apex. Physical examination otherwise negative.

LABORATORY FINDINGS

Urine: Slightly cloudy; deep yellow; acid; specific gravity 1.017; albumen 2+; sugar, none; blood, none; rare granular casts. White blood cells 10-15 per field. Acetanilid was recovered from both

morning and evening specimens.—(Todd-Sanford p. 165).

Blood: Hemoglobin 65 per cent; red blood cells, 3,650,000; white blood cells, 9,200, and Wassermann, negative.

Urea nitrogen: 14.9 mgs. urea nitrogen per 100 cc. blood.

Electrocardiogram: Showed regular sinus type rhythm. P-R intervals .16 of a second. R-S intervals .07 of a second. Complexes, normal in character showing left axis deviation.

x-Ray: Stomach, gall-bladder, urinary tracts and skull showed no evidence of pathology.

A diagnosis of chronic acetanilid poisoning with secondary anemia, kidney and myocardial damage and chronic malnutrition was made.

The patient was put on a forced feed diet with abundant fruits and vegetables; meat once a day, and a glass of milk and cream six times a day. He was advised to take modified Bland's capsules three times daily. He was given a prescription consisting of phenobarbital, grains $\frac{1}{2}$, and aspirin, grains 5, to be taken when necessary for headache. His smoking was limited to three pipefuls after meals and none within one hour before each meal.

During the first three weeks the patient made a remarkable gain. His color improved as well as his weight and strength, the weight being 119 pounds. With normal eating and a reasonable gain in weight his headaches disappeared quickly.

He was last seen on July 5, 1933, at which time he weighed 127 pounds and felt very well, reporting that he could walk three or four miles each day without experiencing either extreme fatigue or any shortness of breath. The blood pressure was 120/80; the urine showed a trace of albumen and rare hyalin casts. The blood picture showed hemoglobin 94 per cent; r.b.c., 4,810,000 and w.b.c., 8,600.

The patient states that many of his old friends are no longer able to recognize him because of his changed appearance.

This patient had been taking Dr. Miles' Anti-Pain pills for three years and gradually losing his health. The label on each package of these pills states

that each pill contains two grains of acetanilid. His rather remarkable comeback to normal health since he ceased to take these pills would indicate that they were the causative factor in producing all of his trouble. During this period he declares he has taken no other medicines.

Patients should be warned against the use of acetanilid preparations taken regularly over long periods of time and the danger in so using these preparations should be printed on the labels. There are still pitfalls for the self-prescribing patient.

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Fibrosarcoma of the Anterior Abdominal Wall—Report of Two Cases

C. C. NESSELRODE, M.D.*

M. A. WALKER, M.D.*

Malignant tumors of connective tissue origin and located in the anterior abdominal wall are so infrequent that a report of our two recent cases seems justifiable.

Case 1. A married white woman, 38 years old, had been aware for at least 15 years of a firm light brown spot the size of a pea in the skin of the anterior abdominal wall, 5 cm. medial to the right anterior superior iliac spine. In 1931, the gradual enlargement of this lesion caused her to consult her family physician, who advised its removal. Soon she became pregnant, for the sixth time, and the nodule enlarged quite rapidly. Her doctor then urged immediate removal of this tumor, but she absolutely refused. During the eight months following the birth of her baby, to December, 1932, when she entered St. Margaret's Hospital for operation, she had lost 40 pounds of weight, from 213 to 173. The mass had become firm and nodular, occupied most of the space between the umbilicus and the right anterior superior iliac spine, and was attached to the skin, which was slightly elevated and light brown over an irregular area about 10 cm. in diameter. There were three fairly discrete subcutaneous nodules, each about 4 cm. in diameter, and several

*Department of Surgery.

other contiguous pea-sized nodules; the entire mass was freely movable on the deep fascia. There was no evidence of metastasis in the liver, lungs, regional lymph nodes, or elsewhere.

Using local infiltration anesthesia, the entire tumor was removed in a rectangular block of tissue comprised of the skin and subcutaneous tissue down to the aponeurosis of the external oblique muscle. When the three large nodules were subsequently cut, the surface of one had the typical architecture of a benign fibroma, with interlacing white and gray fibrous strands. The surfaces made by cutting the other tumor nodules, however, were homogeneous, gray, and had the consistency of firmly set gelatin. These nodules were extremely cellular spindle-cell fibrosarcomata. The patient had an uneventful convalescence and at present is seemingly in good health.

Case 2. Because of severe cramp-like pains which occurred at each menstrual period, a colored woman, single, 24 years old, was operated elsewhere in July, 1928. Both uterine (Fallopian) tubes, the left ovary, and the appendix were removed; the pathologist reported these organs had undergone moderate acute and chronic inflammatory changes. The patient was then in good health for more than a year except that she continued to have severe cramps with each menstrual period. In January, 1930, she first noticed some small nodules under and around the scar resulting from the first operation. These gradually increased in size until, in March 1931, severe nodular tumors the size of grapefruit were removed from the abdominal wall; the diagnosis by the pathologist was fibromyxoma, possibly malignant. A cystic right ovary was also said to have been excised at this operation, and thereafter the patient had scanty and painless menstrual periods every five or six weeks. In November, 1931, she again noticed nodules around the scar.

In March, 1933, when we saw this patient for the first time, the abdominal wall was bulging from the costal margins to the pubic symphysis with large round and ovoid subcutaneous tumor masses. There was no actual involvement

of the skin, although the keloid scar of the last operation was slightly elevated throughout its length and had an average width of 1 cm. Tumor masses could not be felt in the pelvis, and metastases could not be found in lymph nodes or elsewhere. A roentgenogram of the thorax was negative.

Although the involvement of the abdominal wall was extensive, the slow growth of the tumor seemed to warrant an attempt at its complete excision. Using ether anesthesia, an incision was made in the right epigastric region, the only portion of the anterior abdominal wall not involved by the growth. After incising the peritoneum, however, the discovery of large fixed retroperitoneal masses made apparent the hopelessness of the situation. The tumor tissue in the abdominal wall seemed to be entirely posterior to the deep fascia, and did not arise from the skin. A section excised for microscopic study showed a moderately cellular fibro-myxosarcoma.

COMMENT

Both cases demonstrate the need of constant emphasis to the lay public and to physicians of the desirability of the wide removal of all newly formed palpable lumps. Both our patients delayed much longer than was necessary for the establishment of a diagnosis sufficient to warrant a surgical procedure. Wide excision of a block of tissue containing a tumor, clinically and histologically malignant but still localized, has resulted in many apparent cures. Our first patient was so treated, and thus far has had no recurrence. In our second patient, the condition present at the time we operated on her is incurable in the light of our present knowledge of the treatment of cancer. Such slowly growing tumors, of only slight malignancy as judged by histological examination, are not influenced by radium or roentgen rays. Their rate of growth frequently seems to be accelerated by their partial removal; incomplete excision of benign tumors may even be a factor inciting malignant change. Therefore, we again wish to urge the complete and wide excision of growing tumors as early as possible, while the lesion is still localized and while a prospect of entire cure can be offered.

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

A symposium on silicosis contributed by a group of distinguished clinicians and research workers occupied a prominent place on the program of the annual meeting of the National Tuberculosis Association held in Toronto, June 27-30, 1933. Extracts of the papers, which will be published elsewhere later, are here presented.

Silicosis and Tuberculosis

A. J. Lanza, specialist in industrial medicine, stated that while it is impossible to estimate accurately the prevalence of silicosis in the general population, studies among employees of trades with a silicotic dust hazard show a high tuberculosis mortality among them. Much of this excess in the tuberculosis death rate may be ascribed to silicosis. In a few instances the prevalence of silicosis has been carefully estimated, but the rates so obtained cannot be applied generally because industrial conditions vary so widely. However, it is apparent that silicosis is a widespread industrial hazard, is probably on the increase, and affects to an appreciable extent the death rate among industrial workers exposed.

Professor S. Lyle Cummins of Wales, Adviser to the (British) Tuberculosis Research Committee, which recently issued an epochal report on tuberculosis among South African natives engaged in gold mining, stated that there are serious lacunae in our knowledge about dust diseases. "Silicosis" is a state of bilateral lung and lymph-node fibrosis, for the most part nodular in type, resulting from the inhalation and the retention in the lung of the dust of hard stone; the particles being in such fine division as to enter the pulmonary alveoli and ultimately the lung tissue where they set up characteristic changes and determine an increased liability to pulmonary tuberculosis. We know, too, from the animal experiments of reliable investigators, that free silica introduced into the tissues, either in its crystalline form or as

a solution, sets up inflammatory processes leading on to fibrosis; and that its presence acts as an adjuvant to the local multiplication of tubercle bacilli.

In South Wales coal miners suffer with a condition corresponding to the silicosis of metalliferous miners, but which does not apparently predispose to fatal lung tuberculosis. These observations question the criteria on which the diagnosis of silicosis is usually made. Studies among gold miners in South Africa provide much accurate information. The dust inhaled by miners on the Rand contains other elements than free silica. Some of the elements of these complex dusts may be adjuvants to the action of free silica and others may tend to neutralize it. We need, said Dr. Cummins, a scientific "recessional" in which to re-examine with an open mind many of the generalizations now accepted as current coin in relation to silicosis and "miners" phthisis.

Pulmonary tuberculosis so readily complicates simple silicosis, said A. R. Riddell of Toronto, that silicotic fibrosis rarely reaches advanced stages without its occurrence. Simple silicosis seldom occasions conscious disability unless the fibrosis is advanced.

Clinical signs in silicosis are those common to fibrosing lung conditions and therefore not characteristic except that they generally occur throughout the chest and are not confined to circumscribed areas. A lessening of the breath sounds or blanketing together with a shortening of the inspiratory phase, which is at the same time raised in pitch, has diagnostic value. *x*-Ray shadows, when considered in conjunction with a clear history of exposure, are diagnostic.

The teaching that tuberculosis arising among those in silica trades is not infectious cannot be universally entertained. The author has found as great an amount of infection among the wives and children of tuberculous silicotics as among those in contact with ordinary tuberculosis.

Leroy U. Gardiner of Saranac presented a picture of the pathological sequence following inhalation of silica dust.

Autopsy material in this country is rare, but this lack is compensated to some degree by the fact that silicotic conditions can be reproduced in experimental animals.

The first reaction to inhaled silica is non-specific and is probably the same for any type of dust. It consists of accumulations of phagocytes in the subpleural air spaces accompanied by a slight thickening of their walls. By *x*-ray this may be visualized as a slight diffuse haze beneath the pleura in the mid-portions of the lungs.

Phagocytes carry the silica to lymphoid tissue within the lung and the mediastinum where nodules of fibrous tissue develop which compress the lymphatic vessels and interfere with the flow of lymph. Phagocytes pass through the walls of the lymphatics and excite fibrosis in the areolar tissue about them. In the roentgenogram the thickened vascular trunks, beaded by minute nodules of specific reaction, are now clearly discernable. Nodules in the tracheobronchial nodes enlarge these structures and widen the mediastinal shadow.

When lymphatic obstruction is advanced phagocytes carry dust immediately into all parts of the pulmonary framework with the formation of a diffuse fibrosis and multiple nodules in the walls of the terminal air spaces. The roentgenogram discloses great numbers of discrete nodules uniformly scattered throughout the lung, which are easily visible because surrounded by compensatory emphysema.

Acute silicosis is said to develop in response to excessive concentrations of exceedingly fine dust. Sections of all those seen by the author have been complicated by tuberculosis but the simple form may occur.

When tuberculosis complicates silicosis it may arise from a pre-existing latent infection or from a new one acquired during occupational life. It becomes more common as the amount of silicosis increases. The combination of the two conditions constitutes a new disease entity which is characterized by lesions different from those which either irritant produces alone. In the presence of tuber-

culosis the silicotic nodules increase in size and its borders become ill-defined and irregular. Its center may caseate but often it does not. Tubercle bacilli are rare or absent. Conglomerations of nodules imbedded in a matrix of dense pigmented leather-like scar tissue are common in the mid lungs and are frequently bilateral. Foci of caseation or even cavities may occur within such areas. Such changes are demonstrable both by roentgenogram and post-mortem sections. The cause of the susceptibility of the silicotic lung to tuberculosis remains to be demonstrated although various experimental data have shed some light upon the character of the process.

Willis S. Lemon and George M. Higgins of Rochester, Minnesota, described the development of the pulmonary silicotic nodule in the experimental animal. The amount and the situation of lymphatic tissue determine not only the site but the physical characteristics of the developing lesions. They become massive and conglomerate in the progressively smaller and more discrete as the sizes of the bronchi decrease. Lesions of variable size occur in the subpleural regions.

Henry K. Pancoast and Eugene P. Pendergrass of Philadelphia described the roentgenological aspects of this subject. The roentgen examination is the most exact means of determining the presence of silicosis, the degree of progression and the differential diagnosis.

—R—

Paul C. Hodges, Wright Adams and Wayne Gordon, Chicago (Journal A.M.A., Sept. 16, 1933), point out that roentgen examinations conducted for the purpose of finding out whether the heart of a sick child is enlarged presume a knowledge of the normal size of the heart of that child. Tables and formulas exist for predicting the normal size of the heart from the height and weight in adults, but there has been need for similar equations for children. As the result of teleoroentgenographic studies on 169 carefully selected normal children ranging in age from about 3 years to about 19 years, such an equation has been developed. It reads: $F = 0.180H + 1.045W + 13.7$. A table is published by means of which estimates of the normal size of the heart can be made rapidly without computations.

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EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

EPIDEMIC ENCEPHALITIS

During the period August 7 to September 10, inclusive, 656 cases of encephalitis were reported in St. Louis City and St. Louis County. Unofficial reports since that date bring the total to more than 950 cases. Approximately 17 per cent have had a fatal termination. The present outbreak, as regards the number of cases, is the most serious that has occurred in the United States. In the epidemic which prevailed in New York City in February and March, 1932, approximately 500 cases were recorded.

The term "sleeping sickness," as applied to the cases is a misnomer. Early evidence of cerebral involvement is shown and is usually the first symptom. Pronounced somnolence is rare; the pa-

tients, however, are physically and mentally sluggish. On the other hand, many are delirious and require restraint; yet, they are infrequently noisy.

The cases have occurred during the summer season which is unusual, as previous epidemics have been reported during the winter months. Preliminary studies show that approximately 36 per cent of cases have occurred in the age group under 35 years, which comprises 60 per cent of the total population. Of the remaining 64 per cent of cases, 35 per cent have occurred in those over 55 years, which comprises but 13 per cent of the total population. More than 90 per cent of deaths have occurred in the age group over 45 years.

The symptomatology of the cases has varied somewhat from most other outbreaks of encephalitis. Disturbances of the motor functions of the eye are rare. The clinical picture is that of a general febrile disturbance, often with gastrointestinal symptoms such as nausea, vomiting and constipation, even obstipation. There are definite evidences of cerebral involvement, an apathetic or immobile facial expression; usually stupor or delirium; a stiff neck, with headache which is often the first and most pronounced symptom, and other pains as of the abdomen or legs; tremor and catatonic semi-rigidity are common in the most severe cases. Tendon reflexes such as those of the elbow, knee and ankle and superficial reflexes such as made by stroking the abdomen tend to be diminished, or absent. A positive Kernig is present in many of the cases.

The triad of symptoms includes: (1) A febrile course; (2) evidences of cerebral involvement, and (3) mild meningeal signs. The duration of the febrile stage is irregular, as the temperature may be normal within a few days after onset.

The cases which have recovered are apparently restored to normal health, even with the most severe type of infection as evidenced by the development of coma within a few hours after onset and Cheyne-Stokes' breathing.

Diagnostic symptoms and signs are: (1) Evidence of cerebral involvement, with headache, stupor, or occasionally delirium; (2) temperature, which may last only three or four days or may be prolonged more than two weeks and decline by lysis; (3) nausea and vomiting; (4) rigidity of the neck; (5) slightly dilated pupils which react to light, but slowly or not at all to accommodation; (6) positive Kernig in the majority of the cases, and (7) spinal fluid count in excess of 10 cells. One of the clinicians who has seen many of the cases states that two almost constant symptoms are the "splotching" of the palate for a distance of approximately one inch anterior to the uvula, and absence of the abdominal reflex during the first three to five days with return and hyperactivity after the acute stage has subsided.

Judging by the analogy with poliomyelitis which this disease resembles epidemiologically, it would seem that human cases and carriers are the transmitting agents, the virus being carried in the naso-pharyngeal secretions and gaining access to the central nervous system through the naso-pharyngeal mucosa. Connected cases and cases in the same family have occurred about as frequently as would be expected in a poliomyelitis epidemic of similar proportions.

The precautions advised in the prevention of the spread of the disease are in general those which are applicable in an epidemic of poliomyelitis, including isolation of the patient for three weeks. Contact with the patient or persons other than the members of the immediate fam-

ily should be prohibited. Contact with the members of the family should be reduced to a minimum. Nose, throat and mouth discharges should be received in paper receptacles and burned. Bowel and bladder discharges should be disinfected.

No specific treatment has been developed. Spinal puncture is routine, with consequent relief of headache. Intravenous glucose in 10 per cent solution is used to maintain nutrition and prevent edema; 50 per cent solution is used in those patients who develop coma. Sedatives are necessary for patients who develop delirium. Patients cared for in hospitals show a better response than those cared for in the home.

For the present year to September 16, inclusive, 69 cases of encephalitis have been reported in Kansas, from 23 counties. Twenty-one cases have been recorded in Wyandotte County, 19 of them in Kansas City; five cases were reported from Wilson County, and four each from Finney, Franklin, Leavenworth and Sedgwick, Doniphan, Reno, Harvey and Shawnee have each reported three cases, and Linn and Smith, two each. Single cases have been reported from the following counties: Butler, Cloud, Cowley, Ellis, Ford, Grant, Jackson, Lyon, McPherson, Nemaha and Sherman. Ten deaths were reported from January 1 to August 31, inclusive.

Only one area of the state has shown an unusual increase in the number of cases. It is not anticipated the disease will reach epidemic proportions. On the other hand, the total of cases of all types of encephalitis for the year will undoubtedly be the highest on record. Physicians are requested to promptly report all cases or suspected cases to local health officials.

FEDERAL MEDICAL RELIEF

In accordance with the Federal Emergency Relief Act of May 12, 1933, the Federal Emergency Relief Administration issued on June 23, rules and regulations which will provide adequate medical service for persons now indigent and receiving federal relief. Medical relief is available to all persons who are on the federal relief rolls but it is the understanding persons may apply and receive medical relief only, although such persons must prove their need for this type of service. The scope of medical care has also been defined to include: bed-side nursing care in connection with medical care, and emergency dental service for such families as are receiving federal relief.

The Federal Relief Administration has made every attempt to preserve the traditional family and family-physician relationship in the authorization of medical care of indigent persons in their homes; consequently, the choice of physician may be designated by such person or persons who are to receive the medical care. The same provision has been made for dental and nursing service. Funds, however, cannot be used for the payment of hospital bills or to provide general institutional care. Such services to the indigent should be made available through local funds.

Authority for medical care is to be issued in writing by the local relief officer on the regular relief order blank. In an emergency, telephone authorization may be made but is to be immediately followed by a written order. Authorization for bed-side nursing care will be made on recommendation by the attending physician.

Provision is also made for the purchase of medicine and medical supplies to be used in the home. Authorization

for medicine or medical supplies will be issued in writing and only upon the written request of the physician. Request is made, however, that physicians use a formulary which excludes expensive drugs where possible, but if expensive medication is considered essential by the attending physician it may be authorized after consultation with the local medical advisory committee. Further provision is made that "prescriptions for necessary drugs and medicine shall be restricted to the National Formulary or the United States Pharmacopeia. To avoid excessive expenditures on remedies of unknown or doubtful value, proprietary or patent medicines shall not be authorized."

The Administration in the promulgation of its rules and regulations provides the agreement for medical relief shall be between the state and/or local relief administration and the organized professional group of physicians, nurses and dentists. Requirement is made that a fee schedule be outlined and a flat rate established on a per visit basis for the usual care given acute and chronic illness, for attendance at confinement, and "all special services (medical, nursing or dental) be covered by an agreed reduction from the usual minimum fee schedule for such services with an agreed maximum fee. . . All fees shall be established on the basis of an appreciable reduction from the prevailing minimum charges for similar services in the state and local communities, with due recognition of the certainty, simplicity and promptness of payment, that authorization from the local relief administration insures."

At the Annual Conference of Secretaries of Constituent State Medical Associations held in Chicago, September 22 and 23, it was learned that a number of states, including New Hampshire, New

Jersey, Kentucky and Montana had had this type of service for a varying period of several months, and apparently the arrangement was entirely satisfactory. One state reported that a fee schedule had been adopted whereby the work was done for 15 per cent less than the normal fee. Another stated that although the agreement had been made by the state medical society with the Relief Administration, the medical society had the privilege of withdrawing at any time and also had the right to decide when the emergency ended.

Under the provisions of the rules and regulations, advisory committees of the medical, nursing, dental and pharmaceutical associations are to be organized to confer with state relief officials in the formulation and adoption of adequate programs for medical and dental service and nursing care in the homes. Consequently, a committee will be appointed by the President of the Kansas Medical Society to confer with local relief officials and as soon as a program is formulated immediate notification will be made to the local county medical societies.

President Colt has designated the Executive Committee to act for the state society, and at a called meeting the following resolution was adopted: "It is the sense of the Executive Committee of the Council of the Kansas Medical Society in session this 29th day of September, 1933, at Topeka, that the proposed measures to afford medical care, and bedside nursing for recipients of unemployment relief under the FERA and the rules and regulations governing such medical and nursing care be approved, and that the same be recommended to the medical profession of the state. It is also recommended that component units be authorized and

requested to appoint for their respective county and/or district, a committee which shall arrange as to the fees and other details of such service according to the basis of fees already established for each community.

"It is further the sense of the Executive Committee that emphasis be placed on the fact this is an emergency measure and is to be terminated at the will of the component societies in the various communities served."

PHYSICIANS AND THE NRA

In an effort to combat the present financial situation resulting from the depression, the National Industrial Recovery Act was passed by Congress. Under the provisions of the Act the President was authorized to coordinate the various trades and industries in an effort to increase employment.

Practitioners of medicine have been interested in the success of the NRA. Many questions have arisen as to the relationship of the medical profession to the NRA. Physicians cannot have definite working hours and, therefore, they do not come specifically within its stipulations; neither do their professional employees. However, if a physician has in his employ more than two persons of the non-professional type, they should be under the National Industrial Recovery Act as relates to maximum working hours and minimum wages. Attention was called to this particular provision through action of the executive committee of the Kansas Medical Society at a called meeting on August 8, and published in the September Journal, on page 368.

A statement for the information and guidance of physicians in their relation to the NRA has recently been prepared and appears in the *Journal of the American Medical Association* under date of

September 16, 1933. The statement may be summarized briefly as follows:

1. The National Industrial Recovery Act and the President's Reemployment Agreement do not cover legally the practice of medicine. A practitioner of medicine is not within the purview of the act or of the agreement unless his practice is an integral part of a trade or industry. He incurs no legal liability if he refrains from signing the agreement. All this, however, should not prevent any physician from signing the agreement if he desires and if he can do so consistently with the purpose and spirit of the National Industrial Recovery Act.

2. Before signing the President's Reemployment Agreement, a physician should determine whether his doing so and displaying the Blue Eagle may not tend to discriminate against his less prosperous professional associates.

3. Every county medical society may well, either with or without a request for advice from some individual physician, determine whether the requirements of the President's Reemployment Agreement are such that every physician in the community can practice under it without undue hardship.

4. To avoid future disappointment, it must be recognized that the law does not provide for the punishment of a physician who signs the President's Reemployment Agreement and then cheats. It is understood, however, that the National Recovery Administration has in mind the setting up of machinery whereby persons who have obtained the Blue Eagle and who cheat under it will be held up to public odium through action compelling the surrender of the official insignia.

5. A physician who employs no one can subject himself to the requirements of the President's Reemployment Agreement if he so desires and thus obtain the

right to display the Blue Eagle.

It is anticipated that each member of the Kansas Medical Society will cooperate whole-heartedly in the spirit of the NRA.

EDITORIAL COMMENT

During the past ten years there have been 17,152 cancer deaths reported in Kansas. Of this total, 7,097, or 41.1 per cent were the result of cancer of the stomach.

Major William S. Prout, M.C., U. S. Army, former Kansas physician, on duty at U. S. Military Academy, West Point, N. Y., has been assigned to the Hawaiian Department.

Numerous medical publications have called attention to the increase of malpractice suits filed in recent months. Undoubtedly, many malpractice suits are developed as the result of some unintentional comment made by some other physician.

According to a recent announcement Dr. Eben J. Carey, director of the medical exhibits at the Chicago Century of Progress Exposition and Professor of Anatomy at Marquette University since 1920, has been named dean of the Marquette School of Medicine.

The use of the term "doctor" by a chiropractor is a violation of the medical law of Quebec, a justice of the superior court decided in a recent test case to determine the rights of chiropractors in the province. (*Medical News, Canada. Jour. A.M. A.*, Sept. 9, 1933.)

Dr. E. L. Keyes states the infant mortality rate from syphilis has declined 42 per cent in the Birth Registration Area between the years 1917 and 1929, and the decline was 47 per cent in urban centers and 33 $\frac{1}{3}$ per cent in rural areas. (*Jour. Soc. Hygiene*, January, 1933.)

President James Rowland Angell of Yale University, has announced that Dr. Harvey Cushing has accepted the Sterling Chair of Neurology at the Yale School of Medicine. The position was created as the result of a gift of \$300,000 from the estate of John W. Sterling.

Under the provisions of the proposed new national food and drug law, false advertising would be prohibited. The present law prohibits false or misleading statements on the labels of food and drugs; under the new law, labels must tell enough about the product that the consumer will know what he is getting. The Food and Drug Administration will also be able to prevent the sale of drug products if the claims for them are contrary to general agreement of medical opinion.

Three youths, 17, 18 and 20 years old, were each sentenced to 100 years in the penitentiary after a trial in criminal court in Chicago, August 14, when they pleaded guilty to the murder of Dr. B. F. Garnitz, last February. The physician answered what was presumably an emergency call and drove to the address given, an empty apartment, where the youths met him, robbed him and shot him in the side. He died March 11. (*Jour. A.M.A.*, August 19, 1933.)

The Bureau of Investigation of the American Medical Association has for its primary object, the collection and dissemination of information on "patent medicines," quacks, medical fads and various other phases of pseudo-medicine. The Bureau collects its information through (a) original investigations often supplemented by analytical work done in the Chemical Laboratory of the American Medical Association or in other high-class laboratories; (b) data received from federal sources (the Food and Drug Administration of the United

States Department of Agriculture, post-office fraud orders, Federal Trade Commission, etc.,) as well as from state and municipal boards of health; (c) information published in technical and other journals, both domestic and foreign, and (d) reports of special commissions.

During the month of October an information card was sent from the American Medical Association to every physician in the United States and Canada. The information which was secured is to be used in compiling the thirteenth edition of the American Medical Directory. The last previous directory appeared in 1931 and in all probability the fourteenth volume will not appear before 1936. The American Medical Directory is one of the most important contributions to the work of the medical profession. In this Directory is found dependable data concerning physicians, hospitals, medical organizations and activities. It provides full information concerning medical colleges, specializations in the field of medical practice, membership in special organizations, tabulation of medical journals and medical libraries and indeed practically every important fact concerning the medical profession in which anyone might possibly be interested. Members of county and state medical societies are differentiated from non-members. The specialty symbol which is used in the Directory is given only when a physician is a member of his county society, a professor in a medical school, or a member of one of the special societies listed in the Directory. There is a distinct advantage to members whose name is listed in the American Medical Directory as belonging to the county, state and consequently the American Medical Association. If you have not furnished this information attend to it at once. If you did not receive a card notify the American Medical Association.

THE PRESIDENT'S MESSAGE

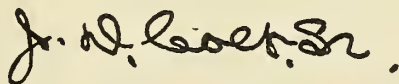
THE NEGLECTED HEART

In my opinion, for the last twenty years our heart cases have been sadly neglected, though all this time we have been conscious of the fact that the death rate from heart diseases of all types has been alarmingly increased. All over the country we are holding tuberculosis and cancer clinics and surveys. I am tempted to say that these conditions have almost reached the epidemic stage. My conscience will not allow me to call them fads, for I, like you, am aware of the great good which has arrived from their activities. I certainly would not want you to slacken your efforts in an attempt to stamp out these two horrible diseases. However, it is high-time that we give some added attention to the heart. While it is true that we realize in this country during a period covering the last half century 17 to 20 years have been added to normal life expectancy, we should not lose sight of the fact that most of this gain is made in the first two years of life and that no appreciable gain is shown after the age of 50. In fact, a very marked loss is found in several important diseases, heart disease heading the list of the greatest mortality increase.

Statistics show that the average life of a railroad engineer is 45 years; over 90 per cent die of some heart lesion or some form of nephritis or both. The average individual of to-day assumes the life of a railroad engineer, driving his automobile at a terrific speed, under the same strain to the nervous system, assuming the same responsibility and receiving the same vibration to the cells of the body. Then, too, we are shamefully abusing ourselves by living indiscreetly, eating and drinking indiscreetly and exposing ourselves with little consideration of the damage we are receiving.

I am not trying to detract from the thought of a focal infection being responsible for most of the heart lesions. In fact, I believe that focal infection is the exciting cause of them all. These remarks have a bearing on resistance against heart diseases. I believe that most of these heart cases are avoidable, but when once contracted are incurable. Seventeen per cent of the people of the United States who die after the age of 50 die from some form of heart disease. These statistics I obtained from the reports of 51 Life Insurance Companies.

In this discussion on the "Neglected Heart" I have included the types of angina with other types of heart disease. From now on let us give the heart of our patients a little more attention; possibly we may prevent some of the heart lesions which are so common.



Manhattan, Kansas

President, Kansas Medical Society

September 20, 1933

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

Epidemic Encephalitis

Following current medical thought this page is given over to a discussion of epidemic encephalitis. Elsewhere in this Journal the subject is discussed in regard to the symptoms, diagnosis and contagion factors. It was the privilege of the writer to visit St. Louis in September, and see some 75 cases. An endeavor will be made to present some of the observations made there.

One of the most striking things found was that these cases were not of the lethargic type; it is the exception when the patient sleeps more than normal, yet a common finding that the patient is unconscious and violent. For the most part, the cases occur in people past middle life. The most constant findings were: Headache of two or three days duration before consulting the physician; rigidity of the neck; a temperature, usually about 104°, lasting four or five days and subsiding by lysis; a mottling of the throat with greyish and red spots and a spinal fluid that constantly shows an increase in the total number of cells.

From the laboratory angle, there is little aid in making the diagnosis, except through the cell count of the spinal fluid. The counts vary greatly, from 20 to 1,100 per cu. mm. However, the average case shows from 40 to 60 cells, almost entirely lymphocytes. The spinal fluid protein is not increased, except in those cases with extremely high cell count and this increase is due to the protein from the cells. The spinal fluid sugar does not vary from normal. Some cases show slight increase in pressure but it is not constant and of no diagnostic aid. Repeated spinal punctures were not being used as a therapeutic measure.

The blood changes, likewise, give little aid in making the diagnosis. The total leukocyte count varied greatly, from normal to 20,000 with no relation to the severity of the attack. The blood chemistry was unchanged. The differential count

shows a usual shift to the left of the Schilling count.

The postmortem findings are almost constant and typical. In the brain, grossly, there are the typical petechial hemorrhages in the grey matter and in some cases extending into the cortex. The brain as a rule is edematous, even to the point where the convolutions may be flattened. The microscopic changes in the brain are also typical and constant, with dilated blood vessels, and a very definite perivascular infiltration with round cells.

The lungs show in many cases, a moist influenzal-like pneumonia, (the bacteriology of which varies with either pneumococci, streptococci or influenza bacilli predominating). In the kidneys some very interesting changes have been observed; inclusion bodies have been found in a number of cases in the lining epithelium of the convoluted tubules. Inclusion bodies of various sorts are frequent in virus diseases and on this basis it would appear that epidemic encephalitis is likely to be one of the virus diseases.

Experimental work in attempting to transmit the disease to monkeys by intracerebral inoculation has given encouraging results but it is too early to state that experimental transmission has been successful. Nevertheless, these results would strengthen the opinion that the condition is one that is transmissible and very definitely a public health problem.

To date, no definite findings have been made as to the causative organism; no specific treatment has been developed. Hospitalization appears to be of definite value. The use of intravenous glucose is routinely used for nutrition and to prevent cerebral edema; symptoms are treated as they arise.

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Alan DeForest Smith, New York (Journal A.M.A., July 29, 1933), reviews the records of seventeen cases of osteomyelitis of the spine seen during a period of more than six years. He states that osteomyelitis of the vertebral bodies occurs quite frequently in a comparatively mild form which may easily be mistaken for tuberculosis. These lesions have a marked tendency to cause spontaneous bony fusion of the vertebral bodies. They should be treated conservatively until it is certain that a cure will not result in this way. The author reports two typical cases.

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

PULMONARY EMBOLISM FROM ARSENICALS

Reports of the United States Public Health Service show that at the present time about 643,000 people in this country are receiving treatment for syphilis. There are, of course, many cases receiving treatment that are not reported. According to the ratio of one death for every 16,079 injections, established by the U. S. Navy, there are about 852 deaths from arsenical drugs each year from the 16,075,000 intravenous injections given to the 643,000 people under treatment.

Michaelis in 1911 was the first to suggest that the fatalities resulting from arsphenamine were due to pulmonary embolism formed by precipitates found in the blood after injections of the drug. There is a case report of pulmonary embolism unmistakably due to an injection of arsphenamine. The author also gives a summary of 48 cases of death from arsenicals where 84 per cent of the deaths from arsphenamine were caused by pulmonary embolism and 100 per cent of the deaths by neoarsphenamine were caused by pulmonary embolism.

It is the opinion of Shivers, corroborated by many other authors, that the pulmonary emboli result from a combination of the drugs with the plasma proteins forming precipitates. An acid reaction of the drug as indicated by a P_H value below seven appeared to be the cause of the precipitation of the drug in the blood. If the P_H of the drug is below 7.0 neoarsphenamine, arsphenamine, sulpharsphenamine and salyrgan will cause precipitates to form in dog serum in vitro. If the P_H of the drug is below 7.0 neoarsphenamine, arsphenamine, sulpharsphenamine will precipitate in rabbit serum in vivo causing pulmonary embolism. With the idea of determining a method for the prevention of the accident due to changes in the P_H of the drug an investigation of various indicator dyes was made, for it was felt that if an indicator could be combined with the drug

to show the P_H it would be possible to avoid the injection of an acid solution. Bromthymol blue was selected because it has a P_H range from 6.0 to 7.8, is yellow on the acid side and blue on the alkaline side. It was found to have a very sharp end-point at P_H 7 when combined with neoarsphenamine, in which case it gives a green solution if alkaline and a yellow solution if acid. The amount of the dye which is not toxic even when injected into the blood stream with the neoarsphenamine that must be combined with the drug to give a satisfactory color is 0.8 mg. per ampule of drug. A drop or two of this drug may be added to each dose of neoarsphenamine before injection as an indicator. A method is outlined whereby the combination of bromthymol blue with the drug in ampules will enable the physician to determine at the time of injection whether the drug is suitable for administration.

A plan of use for treatment is outlined when accidents result from acid solutions of these drugs.

Pulmonary Embolism from Arsenicals Injected Intravenously. Shivers, Geo. C. Archives of Dermatology and Syphilology. 27:901-922. June 1933.

THE RELATIONSHIP OF THE AUTONOMIC NERVOUS SYSTEM TO GENERAL MEDICINE

The author attempts to survey the important roles played by the autonomic nervous system in the symptomatology and pathologic physiology of numerous diseases. He ascribes to this system the principal place in the body's effort to preserve a constant internal milieu. The autonomic system has two principal pathways, the sympathetic and parasympathetic outflows, and in their functioning neural and hormonal stimuli are inextricably intertwined. The constitutional type of Eppinger and Hess in which either the sympathetic or parasympathetic system predominates, is reviewed, but the author feels that modern studies of disease do not indicate a clear separation.

The author gives examples of pathologic autonomic reflex activity. A gastric ulcer or an inflamed gallbladder or appendix may all cause hypersecretion and hypermotility of the stomach. Visceromotor reflexes may be seen in the

muscle spasm of intraabdominal disease. Viscero-cutaneous reflexes are also evident in the skin, hypersensitiveness occurring in the same diseases. On the therapeutic side the cutaneo-visceral reflex may be considered the mechanism of benefit from some forms of physiotherapy. Exophthalmic goiter, certain endocrinopathies, and allergic diseases are cited as examples of morbid autonomic function. Paroxysmal states such as epilepsy, migraine, and many vascular crises are also included. The symptoms of certain important and common diseases are ascribed to autonomic reflexes, even some early symptoms of tuberculosis, among them flushing, digestive disturbances, chest and shoulder pain, and others (Pottenger).

The mechanism of fever is given special consideration. The occurrence of hyperpyrexia in irritation of the wall of the third ventricle or the diencephalon is mentioned, also the failure of heat regulation or fever production in animals in whom the sympathetic nerves have been removed, or the cervical cord cut. Human cases of cervical cord injury with severe hypothermia and other striking vegetative symptoms are mentioned (Gordon Holmes). The author ascribes a preponderant role to the disturbance of heat loss through the skin and cites the striking superficial phenomena of the chill, in which internal temperature may be at its height. It is also recalled that fever-like anaesthesia depresses autonomic activity, notably gastric secretion, and certain pathologic states such as asthmatic and gastric crises.

The anatomy of the hypothalamic region is briefly sketched as well as its connections with the pituitary body through the hypophyseal stalk. The speculation on the question of neural or hormonal flow through the stalk is mentioned, as well as attempts to establish definite neural and endocrine correlates. The reader is reminded of the possibility that hypothalamic neurologic lesions may simulate endocrine states.

Psychic factors are discussed and it is felt that the same type of autonomic symptoms may be produced by either psychic or organic stimuli acting on the

diencephalic region, the "mainspring of primitive existence" (Cushing). The psychological conditioning of vegetative reflexes is reviewed. The reality of neurotic suffering is stressed. The possible importance of psychological factors in organic diseases, especially in the autonomic sphere (hypertension, asthma, goiter, etc.) is mentioned. Cushing's work on the relation of cerebral lesions in man to gastric ulcer is mentioned, as well as animal experimentation along the same lines. The opinion of Ingvar regarding the infrequency of organic change in severe neuroses is mentioned, and with it his opinion that a neurosis is a disorder of the whole body, in which a potentially diseased organ succumbs. The organ disease is "uncovered" by the neurosis. The author closes with the opinion that a knowledge of internal medicine is essential to the proper treatment of neuroses. The names and opinions of distinguished investigators are cited throughout the paper.

The Relationship of the Autonomic Nervous System to General Medicine. Sprunt, T. P. *Annals of Internal Medicine*. 7:257. August 1933.

INTRAMUSCULAR INJECTIONS OF LIVER EXTRACT IN THE TREATMENT OF PERNICIOUS ANEMIA

Murphy summarizes the work which has been done on the development of a concentrated solution of liver extract for use by intramuscular injection. Up to the present time this work has been carried to a point where 3 cc. of a solution, which contains the active principle from 100 gm. of liver, "—will replace from 30 to 50 times that amount (3000 to 5000 gm.) of whole liver administered by mouth."

He states the conclusions as to the advantages of this form of treatment as compared with other methods of liver administration are as follows:

1. The dosage is under the absolute control of the physician.

2. In severe relapse the agent is particularly efficient because of its rapid effect.

3. It has high value in treating resistant cases because of the ease and certainty of administration.

4. It supplies optimal amounts of the active liver substance which is the de-

sired end in treating cases in which there is involvement of the nervous system.

5. In cases of uncomplicated pernicious anemia this agent appears to be an ideal method because of the relative infrequency of administration. The usual procedure being to give 3 cc. at an average interval of 3 to 4 weeks.

6. According to the author this is an economical procedure.

7. The difficulties incurred in the usual methods of administration of liver while traveling are obviated.

8. The fact that the substance has to be given by needle may be a disadvantage, but this has been minimized by the infrequency of administration.

The Advantages of Intramuscular Injections of a Solution of Liver Extract in the Treatment of Pernicious Anemia. By William P. Murphy, M.D. The American Journal of the Medical Sciences, 186:361-64. No. 3. September 1933.

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THE PHYSICIAN'S LIBRARY

PRACTICAL HEMATOLOGICAL DIAGNOSIS: By O. H. Perry Pepper, M.D., Professor of Clinical Medicine, University of Pennsylvania; Assistant Chief of the Medical Clinic, Hospital of the University of Pennsylvania; and David L. Farley, M.D., Physician to the Pennsylvania Hospital, Philadelphia; and to the Cooper Hospital, Camden, N. J.; Associate in Medicine of the University of Pennsylvania. 562 pages, illustrated. Philadelphia and London W. B. Saunders Company, 1933. Cloth, \$6.00 net.

A rather comprehensive book dealing with the many phases of hematology. It is well written, deals with the different topics in a concise manner, presenting nothing that is specially new. Topics covered deal with origin of blood, the red and white cell, hemoglobin, platelets, coagulation, blood groups and parasites in the blood. Part two deals with the study of blood in disease. One chapter is devoted to the hematology of infants. The book is valuable and deserves a place in the physician's library.—J.L.L.

URINE AND URINALYSIS: By Louis Gershenfeld, Ph. M., B.Sc., P.D., Professor of Bacteriology and Hygiene and Director of the Bacteriological and Clinical Chemistry Laboratories at the Philadelphia College of Pharmacy and Science. 272 pages illustrated with 36 engravings. Lea & Febiger, Philadelphia. Price, Limp Binding \$2.75, net.

A very excellent book dealing with all phases of urine examination, urine formation and function of the kidneys. The

chapter of pathological constituents of the urine is especially interesting and practical. The chapter on qualitative tests of the urine is complete, giving a detailed description of all the routine tests and the formula for the different solutions used. Apparatus required is also described. This book is recommended for those interested in the subject.—J.L.L.

SURGICAL CLINICS OF NORTH AMERICA: (Issued serially one number every other month.) Volume 13, Number 3. (Lahey Clinic Number, June 1933). 275 pages with 98 illustrations. Per Clinic Year (February 1933 to December 1933). Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

In this number from the Lahey Clinic Dr. Lahey discusses his operative procedure for esophageal diverticula and for various gastric and duodenal lesions. He also presents very nicely the handling of the acute and subacute gallbladder, advising against too hasty surgery in these cases and suggesting cholecystostomy as the operation of choice to be followed later by cholecystectomy.

Dr. Lahey's complete discussion of the hyperthyroid patient is most valuable to both surgeons and general practitioners.

Dr. Howard M. Clute reports two interesting cases of regional ileitis—also discusses cystic duct stones after cholecystectomy and reports an interesting case of severe hemorrhage in obstructive jaundice. He further reports the great relief obtained from choledochoduodenostomy for patients with cancer of pancreas. He also has several contributions of great interest on the thyroid.

Dr. Richard B. Cottell discusses types of operation used in the Lahey Clinic for carcinoma of the rectum and illustrates with a number of case histories.

G. E. Haggart takes up the treatment of ununited fractures and also shows proper method of handling dislocation of the acromio-clavicular joint.

Dr. O. J. Menard suggests the use of the new drug dilaudid, a morphine derivative having powerful analgesic properties for severe cases of chronic intractable pain as in inoperable carcinoma.

There are many other instructive discussions by other members of the Lahey Clinic contained in this volume.—M.B.M.

INTERNATIONAL CLINICS: A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene, and other topics of interest by leading members of the medical profession throughout the world; edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Md.; volume II. Forty-third series, 1933; J. B. Lippincott Company. Subscriptions accepted only for the calendar year. Issued quarterly. Price \$3.00 per volume.

In this volume of *International Clinics* will be found a very instructive lecture on hyperinsulinism, a comparatively recently described condition, by Dr. Russell M. Wilder, Division of Medicine, The Mayo Clinic. His paragraphs on symptoms are given in detail, also a very complete study on diagnosis, differential diagnosis and treatment, both medical and surgical.

An interesting discussion of hypertension is given: Causes of Hypertension by John T. King, Jr., M.D., Johns Hopkins University School of Medicine; Clinical Manifestations of Arterial Hypertension by Ralph H. Major, M.D., University of Kansas School of Medicine; Prognosis of Hypertension by Dr. James E. Paullin of Emory University School of Medicine and Treatment of Essential Hypertension by Dr. Herman O. Mosenthal of the New York Post-Graduate Medical School.

Progress in Pediatrics by Lawson Wilkins, M.D., Baltimore, includes: Present Status of Epilepsy; Treatment of Hirschsprung's Disease, and two articles on Meningitis, all worth reading.

In fact, this volume of *International Clinics* is especially full of good articles and well worth ones time to read.—C.K.S.

INTERNATIONAL CLINICS. Volume I, Forty-third Series. March, 1933. Edited by Louis Hamman, M.D., visiting physician to Johns Hopkins Hospital, Baltimore. Octavo. 305 pages. 16 illustrations, 1 colored plate. Philadelphia, Montreal and London, J. B. Lippincott Company. Cloth, \$3.00.

This volume contains articles on surgery, medicine, neurology clinical pathology and two reviews on recent progress in medicine and surgery. The articles are well written and cover the selected subjects well in a concise, readable manner. As a general review of some of the more recent investigations in all the branches of medicine it is a valuable contribution to medical literature.—C.E.J.

PERSONALS—NEWS ITEMS

Columbus: Dr. A. J. Revell has removed to Pittsburg.

Wichita: Dr. Thomas T. Holt has returned from a business trip to California.

Melvern: Dr. G. B. Kierulff has returned from a vacation trip to New Mexico.

Atchison: Dr. Charles W. Robinson has recently returned from a business trip to Atlantic City, Wyoming.

Newton: The Axtell Clinic, announces association of Dr. Arnold G. Isaac, formerly of Goessel.

Kansas City: Dr. Clay E. Coburn left September 16 for a three weeks' vacation in Boston, New York and Philadelphia.

Omaha: Dr. D. C. Malcolm, graduate of the University of Nebraska Medical School, has taken over the office of Dr. W. P. Wilson, deceased.

Kansas City: Dr. J. F. Hassig attended the annual conference of Secretaries of Constituent State Medical Associations held at Chicago, September 22 and 23.

Topeka: Doctors Lattimore, Brown and Kinnaman were in St. Louis on September 11 to confer with federal, state and city officials in regard to the encephalitis epidemic.

Topeka: J. C. Hofmann, M.A., Bacteriologist in charge of the Public Health Laboratory for the state board of health the past four years, resigned October 1, and will enter Harvard University.

Overland Park: Dr. Kenneth Carbaugh on September 10, was held up by two bandits; forced to treat one of them for gunshot wounds, robbed of \$14, then gagged and left bound in his office.

Manhattan: Dr. J. D. Colt, representing the Kansas Medical Society and on the invitation of Secretary of Labor Perkins, attended the Conference on Malnutrition, held in Washington, D. C., October 6.

COUNTY SOCIETY NEWS

FORD COUNTY MEDICAL SOCIETY

Regular monthly meeting was held Friday evening, September 8, at Lora Locke Hotel. About 40 doctors were present from Southwest Kansas. Following a seven o'clock dinner an interesting scientific program was held. Dr. Morrison of Wichita gave a very interesting talk on "Transurethral Prostectomy" giving history of operation, a brief summary of his own series of operations as well as those of other urologists.

Mr. Mac F. Cahal, full-time secretary of the Sedgwick County Medical Society gave a very informative talk on medical organization and public relations. A general discussion followed which served to show the great interest that is being manifested in this line of activity.

At a spring meeting of the Ford County Medical Society a communication was sent to the President of the United States protesting the opening of the Veterans' Hospital in Wichita as being unnecessary and unfair to the veterans themselves as well as to hard-pressed local hospitals. This hospital has not been opened as yet, and the secretary was ordered to send another communication to Washington calling attention to the fact that certain interests were now soliciting veterans to make application for hospitalization to show the need of a hospital in Wichita.

C. L. HOOPER, M.D., Sec.-Treas.

LYON COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Lyon County Medical Society was held at Newman Memorial County Hospital, Tuesday, September 5, at 7:30 p. m., following the Society dinner.

Dr. J. B. Brickell read a very instructive paper on "Surgical Treatment of Pulmonary Tuberculosis," discussing the use of artificial pneumothorax and extra pleural thoracoplasty.

Dr. D. L. Morgan discussed the diagnosis of intra-uterine fetal death and presented an interesting case report of a "Monstrosity."

Dr. C. W. Lawrence reported three unusual cases; "Acute Encephalitis," "Cysts of the Omentum" and "Tubercular Peritonitis."

The case reports brought forth so much interesting discussion we are considering having them at each meeting.

First Lt. Paul Hansen of the local C. C. C. Camp was a visitor.

D. R. DAVIS, M.D., Secretary.

MCPHERSON COUNTY MEDICAL SOCIETY

The McPherson County Medical Society had a special social meeting at the McPherson County Hospital dining room, in honor of its four senior members, namely Doctors G. H. Matchette, D. C. Baer, M. N. Bremen and J. C. Hall, all of whom are over 70 years old. Due to sickness and bad roads Doctors Baer and Bremen, of Moundridge and Roxbury respectively, could not be present. The guest speaker of the evening was Dr. J. T. Axtell of Newton, who also is a senior member of the state society. Doctors Axtell, Matchette and Hall gave interesting reminiscences of early days practice of medicine. Miss Hammann, R.N., gave a fine reading. The hospital, in charge of Miss Duncan, R.N., entertained the group with a bountiful dinner at 7:00 p. m. before the program. Besides the three senior members, we had 13 other members and their wives present. All told, we had a delightful evening together.

A. M. LOHRENTZ, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held in the Hotel Jayhawk, September 5. Meetings were not held during July and August.

Dr. R. B. Stafford, former Kansas physician, but more recently Commissioner of Health of the Virgin Islands, was the guest speaker and discussed: "Medical Practice in the Virgin Islands."

Doctors M. E. Pusitz and J. F. Casto were elected to membership.

A joint meeting of the Shawnee County Medical Society and the Kansas State Board of Health was held at a noon luncheon at the Hotel Kansan, September 13.

Doctors Lattimore, Brown and Kinnaman who had conferred in St. Louis on September 11, with federal, state and city officials in regard to the encephalitis epidemic gave an informal report of their observations.

Although but a short time had been available for telephone notification of the meeting, more than 85 members and guests were present.

EARLE G. BROWN, M.D., Secretary.

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DEATH NOTICES

BOARDMAN, EDGAR W., Parsons, aged 69, died September 22, 1933, of heart disease. He graduated from Hahnemann Medical College, Chicago, in 1884. He was a member of the Society.

FUNK, C. C., Smith Center, aged 59, died September 10, 1933, of obstruction of the mesenteric artery. He graduated from Central Medical College, St. Joseph, Missouri, in 1900. He was a former member of the Society.

HEWITT, AUGUSTUS EDDY, Walnut, aged 73, died September 5, 1933, of diabetes mellitus. He graduated from Rush Medical College in 1889. He was not a member of the Society.

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka

Chairman of Publicity

The Sedgwick County Medical Auxiliary has followed its usual custom of remaining inactive during the summer months. Hence, copy for this page is not easily obtained. After some careful thought, a resolve was made to ape the traditional bantam rooster who, purely by accident, came upon an ostrich egg. After considerable expenditure of effort, he rolled it across the barn-yard and up to the door of the hen house. Then he called all the hens and after they assembled he displayed the ostrich egg and said, "I do not want you to think for a moment that I am complaining, but I just want you to know what they are doing in other localities."

In Alabama there has been an increase of 90 per cent in membership. The Jefferson County (Alabama) Auxiliary has had for three years a loan scholarship of \$300.00 to a Birmingham boy at Harvard.

The San Joaquin County (California) Auxiliary had their county health laws printed and distributed to organizations for use as study material.

Santa Barbara (California) County Auxiliary created a fund known as a student nurse fund, which provided prizes of \$10.00 each for the outstanding graduates from their training schools for nurses in that county.

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1114 Grand Avenue Kansas City, Missouri



The State Board of the California Auxiliary is again offering prizes for the best essays contributed in their contest on the subject, "The Doctor's Dilemma."

Delaware is so small they have only one county—hence, it is the state organization. It is active in the State Anti-tuberculosis Campaign, and is quietly meeting the deceptive methods of cults and quacks and is supporting desirable legislation.

Colorado has instituted a successful story-writing contest on the subject of "Prevention of Disease Through Education."

Denver holds a Public Relations Day at which time the presidents of other health-minded clubs are entertained with health-promoting addresses.

The April Quarterly of the Kentucky Auxiliary carries on its cover, "Thistles and Tuberculosis—Rid Kentucky of Both."

Minnesota awarded five cash prizes in five different towns for the best essays on subjects assigned by the Minnesota Public Health Association.

Ramsay County (Minnesota) sponsored an essay contest for all high school students on the subject, "Tuberculosis and the American Youth."

Missouri continues to lead in the number of annual Hygeia subscriptions, the number being 562. In their essay contest more than two hundred essays were written.

Members of Richardson County (Nebraska) have designed and completed a kit acceptable to and accepted by the doctors working on charity cases during the winter.

So we just want to give you an idea of what is being done in other localities.

Contributed by—MRS. HAL E. MARSHALL,

Wichita, Kansas.

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Advertising space in this Journal is worth what you and other members of the Society make it.

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**THE JOURNAL OF
THE KANSAS MEDICAL SOCIETY**

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of August 2 the following have been accepted:

U. S. Standard Products Company—Antimeningococcic Serum Polyvalent, 30 cc. vial package. Diphtheria Toxin-Antitoxin Mixture, 0.1 L, 10 cc. vial package. Rabies Vaccine—U.S.S.P. (Semple Method) 7 syringe packages. Rabies Vaccine U.S.S.P. (Semple Method) 14 vial packages.

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods:

Mary Lou Flour (Bleached) (The Robinson Milling Company, Salina, Kansas).

Robin's Best Flour (Self-Rising) (Bleached) and Betty Jane Self-Rising Flour (Bleached) (The Robinson Milling Company, Salina, Kansas). (Jour. A.M.A., August 19, 1933, p. 605).

Blair's Certified Northern Type Flour (Bleached) (Blair Milling Company, Atchison, Kansas).

SMACO Hypo-Allergic Whole Milk Powder (S.M.A. Corporation, Cleveland).

Pablum (Pre-cooked) (Mead Johnson and Company, Evansville, Ind.)

Carey's Salt (Free Running) (The Carey Salt Company, Hutchinson, Kansas).

Propaganda for Reform

Hosept Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that "Hosept" is the uninforming proprietary name under which the Homer Laboratories, Inc., markets a preparation claimed to be "The Ideal Cleansing Douche for Feminine Hygiene." No quantitative statement of composition appears on the package. According to the information presented to the Council, the product is claimed to have the following composition: Chloramine technical 28.671 per cent; sodium perborate 26.785 per cent; sodium chloride 42.857 per cent; alum-potassium 00.892 per cent; boracic acid 00.892 per cent; berberine sulphate (neutral) q.s. to color; oil of peppermint q.s. to odor. The firm states that Hosept should be used in the proportion of one teaspoonful to two quarts of warm water, "As an adjunct to office treatment of leucorrhea, gonorrhea and trichomonas vaginalis. Also as a cleansing douche." Its contraindications are not stated. No evidence, either clinical or experimental, has been submitted in confirmation of any of the manufacturer's claims. The Council declared Hosept unacceptable for New and Nonofficial Remedies because it is marketed with unwarranted claims under an uninforming name and because it is an unscientific mixture containing an excessive number of ingredients recommended for use in practically ineffective concentration. (Jour. A.M.A., August 5, 1933, p. 447).

Fortification of Foods Other Than Table Salt with Iodine or Iodine Compounds.—The Committee on Foods reports that the fortification of foods other than table salt with iodine or iodine compounds may lead to excessive iodine intake and endanger public health. Foods so fortified, other than table salt, will

Support in Cases of OBESITY

ABDOMINAL walls, when flabby or pendulous, require the support of a physiological garment with a low-cupped, form-front for security. Uplift should be provided without raising the flesh unduly through the body center, but with a slight flattening effect. The Camp Physiological Support, with the Camp Patented Adjustment, illustrated (Model No. 39)) functions in this way without improper constriction or discomfort.

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not be eligible for acceptance. (Jour. A.M.A., August 5, 1933, p. 448).

"Health Food" Claims and the Term "Healthful."—The Committee on Foods reports that the term "health food" and equivalent claims or statements to the effect that a food gives or assures "health" are vague, misinformative and misleading. No one food is essential for "health"; there are no "health foods." Statements of well established nutritional physiologic values of foods are permissible. The term "healthful," as used, commonly means that the food described corrects a possible nutritive deficiency or some abnormal condition in such a manner as actively to improve health. It incorrectly implies that the food possesses unique (or unusual) health-giving properties. "Wholesome" indicates that a food so described is sound, clean, fit for consumption and free of any objectionable qualities; it is appropriate for characterizing foods fulfilling these qualifications and should replace "healthful" as used in food advertising. (Jour. A.M.A., August 5, 1933, p. 448).

Grandma's Old Fashioned Molasses Not Acceptable.—The Committee on Foods reports that the American Molasses Company of New York submitted a "sugar-cane syrup" called Grandma's Old Fashioned Molasses. The product is a "sugarcane syrup" and not a "molasses" according to the respective United States Department of Agriculture definitions and standards. The label statement "The natural vegetable and mineral properties, vitamins and high sugar content make Grandma's Molasses a healthful food for all," vaguely implies the presence of all the vitamins and minerals required for proper nutrition, which is inconsistent with scientific knowledge on cane sugar syrup. Radio advertising includes the statement "It

is wise to include a food made with health giving molasses such as Grandma's at each meal," which is a type of misleading specific "health food" claim. A recipe booklet "Grandma's Old Fashioned Molasses Recipes" includes many similar misleading claims. The name and claims are inappropriate, misinformative and misleading. The manufacturer has not expressed willingness to correct the name and advertising. Grandma's Old Fashioned Molasses will therefore not be listed among the Committee's accepted foods. (Jour. A.M.A., August 12, 1933, p. 524).

The Glow of Life Fraud—Another aphrodisiac fake debarred from the mails.—"Glow of Life" is a nostrum that was put out by the Glow of Life Laboratories Company of Columbus, Ohio. The company was owned and operated by Frank J. Albert and his brother Ray J. Albert. Frank J. had no medical training or experience; Ray J. was a registered pharmacist. In March of this year, the Postoffice Department called upon the company to show cause why a fraud order should not be issued against it. According to the government's report, the Glow of Life Tablets consisted essentially of nux vomica and zinc phosphide, together with chalk and gum. The promoters had claimed that they also contained arsenic, gold, cantharides (Spanish fly) and laxatives. None of these were found. The government presented expert medical evidence to prove that these tablets would not restore "lost manhood" or cure sexual impotence or frigidity. It also brought out the fact that the ingredients of Glow of Life Tablets have been incorporated in other preparations sold under similarly fraudulent claims in cases wherein fraud orders have been issued against the promoters of such schemes; yet the Glow of Life concern claimed that their product was an original discovery! In view

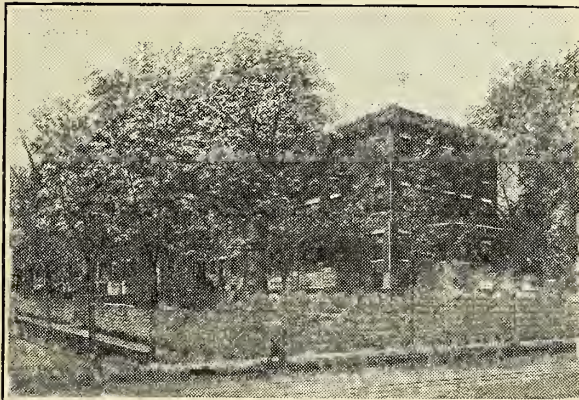
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Neurologist and Addictologist

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of the findings, the Postmaster General on April 26, 1933, issued a fraud order closing the mails to the Glow of Life Laboratories Company. (Jour. A.M.A., August 5, 1933, p. 463).

Caritol and Carotene.—Advertising sent out by the S.M.A. Corporation contains claims for the value of carotene in the treatment of cataract. This claim is apparently based on the reprint of an article by Dr. T. H. Shastid (Carotene and Cataract, American Medicine, January, 1933). The only part of Dr. Shastid's paper dealing with this subject is a short paragraph in which he reports that in "three fairly advanced cases" of cataract he had "excellent results with Caritol." The author urges "other oculists to try out Caritol thoroughly," remarking that "when-ever it does no good, it will do at least no harm." This may be true; but if it "does no good" the patient loses time and money to gain the increased visual acuity which, today, operative procedure can certainly give. It is, of course, misleading for the firm to base claims of the value of "Caritol" in the treatment of cataract on the casual report of three cases. The Council on Pharmacy and Chemistry has recognized no such claims for Carotene or for vitamin A as contained in fish liver oils or concentrates. In its advertising the firm stresses "primary" vitamin A as if it had some superior virtue. As a matter of fact its value apparently depends on its being converted into true vitamin A, which the firm attempts to belittle by the designation "secondary form." It is debatable whether one ought in fairness to refer to carotene as "primary vitamin A." The false implication is that carotene actually is a kind of vitamin A, whereas it is merely a mother substance or possible forerunner of the vitamin itself. (Jour. A.M.A., August 5, 1933, p. 465).

Some Effects of Overdosage with Viosterol.—Not long after the introduction of viosterol, tests made on experimental animals with large doses demonstrated that under certain conditions it can give rise to harm. Before long, however, it was learned that the range between therapeutic and toxic doses is large, so that the danger of overdosage now seems rather remote. Only when the intake of viosterol solutions exceeds the established medicinal dose a thousand times, or by some excess of that approximate magnitude, do the symptoms of disorder clearly manifest themselves. Medicine should welcome every new study of viosterol, particularly in view of the increasing tendency to fortify many common foods, such as milk and bread, with vitamin D. In recent studies by Reed and his co-worker at the University of Illinois College of Medicine, a significant increase in the resting, post-absorptive metabolic rate in animals has been observed following administration of large doses of viosterol. This stimulation of the metabolic rate has been difficult to explain, as it has not yet been quantitatively related to any other observed factor. Hypercalcification has been observed by many investigators. Recent researches indicate that the magnitude of the increase in calcium content is not correlated with the dosage but seems to depend on some undetermined individual factors. It was found that the phosphorus content, while widely variable among individual animals, was affected by the administration of viosterol in a much less constant manner, if at all. According to these studies the significance of deposition of calcium in the tissues cannot be evaluated at present. (Jour. A.M.A., August 26, 1933, p. 714.)

NEUROSYPHILIS

Clinical reports indicate that forty to fifty per cent of cases of early paresis show symptomatic improvement under Tryparsamide therapy. The treatment does not disrupt the patient's daily routine of life and is available through the services of his personal physician. The cost of Tryparsamide has been reduced. The present price to physicians is, 1 Gm. ampul 40 cents; 2 Gm. ampul 55 cents; 3 Gm. ampul 70 cents. Clinical reports and treatment methods will be furnished on request.

Tryparsamide

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Mfg. by arrangement with The Rockefeller Institute for Medical Research — Patentee and Registrant

The Plastic Appliance Institute.—During the past few years there have been advertised devices that the public has been led to believe could, by wearing, be made to change the shape of the adult nose. According to a report by the Chicago Better Business Bureau made in March, 1932, the Plastic Appliance Institute was a partnership affair organized in October, 1931, by Mr. Paul L. Bieles and Mr. K. Trilling. The alleged institute was started in Chicago but left that city and reopened in Sheboygan, Wis., where it continued to do business through the United States mails. The Bieles device was called a "Sculptron," and it was advertised under the claim that there were "no confusing head tapes"—although there were—and that it was "automatic" in its adjustment—although it wasn't. The device itself was an affair of aluminum and felt. There came with it, of course, the inevitable mystery element, a "preparing cream" which was called "Velvex." The device itself is said to have cost about 40 cents. It was sold at first for \$6, the price as it became more difficult to find suckers, being gradually lowered to \$2. In due time the postal authorities got around to the Plastic Appliance Institute, and on May 10 a memorandum of charges was furnished Mr. Bieles, who was called on to show cause why a fraud order should not be issued against the concern of which he was president. The Solicitor for the Post Office Department in his memorandum to the Postmaster-General recommending the issuance of a fraud order, brought out the fact that Mr. Bieles himself had admitted at the hearing that his device had been worn by Mrs. Bieles over a period of several months without producing any material or lasting change in the shape of her nose! It was further brought out that Bieles inaugurated his scheme after observing other enterprises of a similar character, particularly the one

against which a fraud order had been issued by the postal authorities. The Postmaster-General on June 8, 1933, issued a fraud order against the Plastic Appliance Institute and its officers and agents as such at Chicago, Ill., and Sheboygan, Wis. (Jour. A.M.A., August 19, 1933, p. 621.)

FOR SALE: A Tice Loose-leaf System of Medicine in excellent condition, up-to-date, price reasonable. No longer needed because I have associated myself with a group which has this system in library. Address A. G. Isaac, M.D., 209 E. Broadway, Newton Kansas.

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Reprints of original articles will be furnished the authors at the following rates, if the order for same is received within fifteen days after the Journal is mailed. These prices are based on the number of pages of the Journal the article occupies:

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GENTLEMEN:—I hereby make application for membership in your Society, and, if accepted as a member, I agree to support its Constitution and By-laws, to practice in accordance with the established usages of the profession, and will in no way profess adherence or give my support to any exclusive dogma or school.

- NOTE.—The above information is primarily for use in the Card Index System of the County and State and for the American Medical Directory.

THE JOURNAL

of the

Kansas Medical Society

Vol. XXXIV

TOPEKA, KANSAS, NOVEMBER, 1933

No. 11

ORIGINAL ARTICLES

ESSENTIAL CONSIDERATION IN CESAREAN SECTION*

L. V. DAWSON, M.D.

Ottawa, Kansas

From whence came the term cesarean section? Webster's New International Dictionary says of cesarean section: The operation of taking a child from the womb by cutting through the walls of the abdomen and uterus—so-called because Julius Caesar is reported to have been so brought into the world.

Investigation into medical literature and the writings of the men who lived when and since Julius Caesar lived fails to provide any information bearing out that Caesar was so born; in fact, the contrary is more easily proven because the word Caesar while a family or surname among the Romans is from the latin root, *Caedo* to cut, and Plinius gives us several reasons for assuming that confusion in latin translation could exist and easily account for the tradition that Caesar was cut from his mother's womb.

Most of the articles written on cesarean section give considerable early history of the procedure, and some of this I am handing on to you. Many interesting incidents come to light when one digs well into the history of cesarean section; so many, in fact, hours could easily be used in citing a small percentage of them. I shall mention only a few.

The first authentic cesarean operation upon a living woman was done by a Swiss sow gelder on his wife, with a living child and a recovery for the mother. This was in 1500.

The first in the British Isles was in 1730 and was accomplished by a common midwife, Mary Dunaly, on one Alice O'Neal of Ireland, both baby and mother lived. The first authentic case in the United States was performed on herself by a quadroon servant girl 14 years of age who made an L shaped incision through the abdomen and uterus, delivered her child and she and the child both lived notwithstanding that the self-performed operation occurred while the mother was lying in a snowbank exposed to the elements.

Let us contrast these three cases with the fact that for 90 years, preceding 1876, not one successful cesarean operation was performed in the city of Paris.

This brings our attention to more recent results, and we feel consideration of both fetal and maternal mortality rates should be had if we are to continue giving this procedure a place in present day surgery. Dr. Howard Kelly says of Robert P. Harris, M.D.: "He was the most prominent obstetrical statistician this country has ever known." Dr. Harris, delving into the literature pertaining to cesarean section, stated there was a time when the mortality rate of cesarean section, when done by members of the medical profession, was greater than when performed by laymen, insane patients on themselves, and even when accomplished by the horn of an infuriated bull. Dr. Harris gathered nine such cases from medical literature with five recoveries, and during this same period 12 operations were performed by surgeons in the hospitals of New York City with 11 deaths and one recovery. He went so far as to say the mortality rate increased in direct proportion to the skill of the operator.

In 1882 Max Sanger, a German medical student 28 years of age, presented a monograph on cesarean section which started the modernization of the cesarean

*Read before the 75th annual meeting of the Kansas Medical Society, at Lawrence, Kansas, May 2, 3 and 4, 1933.

operation, his principal improvement in the technique being that he closed with suture the wound in the uterus. With the acceptance of this improvement, and the acceptance of many improvements presented by the pioneer surgeons, this operation has advanced to where its maternal and fetal mortality run parallel with normal birth tract delivery.

This last statement demands attention and while statistics are boresome, tedious and soon forgotten, they also form the only reliable basis upon which to establish a set or standard technique; therefore, I shall have to ask your consideration on some statistical data which must be given if I would avoid some one challenging the statement above.

INFANT MORTALITY

Forceps

Five hundred and seventy forceps deliveries. M. Alexander Novey, M.D.⁶ Department of Obstetrics, University of Maryland, Baltimore. Number of deliveries, 16,442.

	Total	Stillborn		Dying in two weeks	
		No.	Per Cent	No.	Per Cent
High Forceps...	63	22	34.9	6	9.52
Mid Forceps...	229	28	12.22	18	7.86
Low Forceps...	278	21	7.55	6	2.15

Total Mortality: 17.71 per cent.

Robert M. Greer³ Evanston Hospital, Evanston, Illinois. Obstetrics and Gynecology, December, 1931. 225 consecutive deaths in 4,668 deliveries.

Total forceps deliveries, 1122—24 per cent

	Number		Per Cent
	Total	Corrected	
Total mortality	35	3.1	
Corrected mortality*	30	2.6	
Total low forceps, 921—19 per cent.			
Mortality total	21	2.2	
Corrected mortality	16	1.7	
Total mid forceps, 174—3.7 per cent.			
Total mortality	9	5.1	
Corrected mortality	9	5.1	
Total high forceps, 27—0.5 per cent.			
Total mortality	5	18.5	
Corrected mortality	5	18.5	

*More than 7½ months gestation.

FETAL MORTALITIES

Breech and Extraction, Version and Extraction

Total deliveries, both types, 310—67 per cent.

	Number		Per Cent
	Total	Corrected	
Total mortality	70	22.5	
Corrected mortality	55	17.7	
Total breech and extractions, 170—3.6 per cent.			
Total mortality	34	20.0	
Corrected mortality	22	12.9	
Less monsters, macerated	12	7.0	

Total version and extraction, 140—3.0 per cent.

Total mortality	36	25.7
Corrected mortality	33	23.5
Less monsters, macerated and pulseless cords	27	19.2
Less placenta previa and ablatio placentae	17	12.1

FETAL MORTALITIES

Hysterotomy and Low and Classical Cesarean Sections

Total sections, 130—2.7 per cent.

	Number		Per Cent
	Total	Corrected	
Total mortality	6	4.6	
Corrected mortality	3	2.3	
Total classical sections, 41—0.8 per cent.			
Total mortality	5	12.2	
Corrected mortality	2	4.8	
Total low cervical sections, 89—1.9 per cent.			
Total mortality	1	1.1	
Corrected mortality	1	1.1	
Total hysterotomies, 6, 0.1 per cent (6 months and less)			
Total mortality	6	100.0	

MATERNAL MORTALITY AND MORBIDITY

Forceps

Harrar⁴ collected 81 cases of abruptio placentae delivered with forceps with a maternal death rate of 10.12 per cent, while he collected seven cases with cesarean section with no deaths.

Novey⁶ shows total maternal mortality in 570 forceps deliveries of 10 or 1.76 per cent with a morbidity rate of 21.57 per cent.

In summarizing a number of reports on maternal mortality one finds a general average rate of 3.2 per cent.

Greenhill² reports 117 successive cases of cesarean section with no maternal mortality and with only five infant deaths or 4.3 per cent and inasmuch as death of three of these infants preceded operation an actual infant mortality of 1.74 per cent.

Cooke¹ gives a summarized maternal mortality rate of 11.1.

McCord⁵ gives a summarized maternal mortality rate of 12 per cent.

One could and does find extensive statistics, and the foregoing are taken from current medical literature and show in cesarean section, an infant mortality varying from 1.1 in a series of low cervical sections to one of 12.2 uncorrected mortality in the classical operation.

They show a maternal mortality rate varying from nil in a series of 117 cases by Greenhill to 12 per cent as quoted by McCord where 25 operations were inci-

dent to over 10,208 deliveries or 1 in 428, and the operations were divided between eight men.

Cesarean section, as we know, is an old, old subject, and medical literature is loaded with statistics both fetal and maternal, some of which are presented to discount the operation and some of which are presented to praise it, but the foregoing statistics are selected and presented either to prove or disprove the advantages of the operation. They are selected to show what can be done, for what has been done can be done again, and so we believe one presenting a series of more than 100 cases with no maternal deaths, or a maternal mortality rate of nil, with a corrected fetal mortality rate of less than 1 per cent, having deducted from his five infant deaths three known to have been dead before the operation and one monster, he has an infant mortality of less than 1 per cent and has most certainly used both judgment in selecting his cases and skill in executing his work.

Contrasting this with figures given by McCord, wherein a maternal mortality rate of 12 per cent in 25 operations obtained, we certainly see a need of more careful selection or more efficient work. McCord states this 12 per cent mortality rate was encountered in the care of 10,208 deliveries, or one cesarean operation in each 428 deliveries, and the 25 operations were divided among eight different operators.

Cooke quotes a maternal mortality rate of 11.5 per cent in a teaching hospital in Galveston, and without admitting that there should be some excuse for this, there may have been some selection in cases made by men of little experience. Yet a maternal mortality rate of 11.5 per cent is too high.

We believe that selection of cases combined with good, operative technique should, and eventually will, show a maternal and fetal mortality rate which will go well with not only forceps deliveries, but with spontaneous deliveries. We can see no reason to believe if one man, or two men, can select their cases and give them surgery which will give mortality rates which run parallel with

spontaneous deliveries, other men should be able to do the same.

One problem which always presents itself is what to do with the failures to deliver in other ways, which are brought to the surgeon or obstetrical surgeon for section after contamination exists. We might not be able to say just what to do with these cases, but we are certainly able to tell what not to do. If these cases are admitted to the hospital and ushered directly to the operating room, the mortality rate will not be reduced. Not all of these patients are candidates for cesarean section. We must not lose sight of the possibilities offered us by putting the mother to bed, administering sedatives, producing rest and quiet, glucose intravenously, blood transfusions, hypodermoclysis, proctoclysis, and many other measures to rebuild what has been torn down. We must not lose sight of craniotomy and embryotomy in case the baby is no longer living. Vaginal treatment with mercurochrome, S.T. 37, or other bactericidal agencies certainly mitigate the virulence of already present infection. We know of no place where the old saying, "haste makes waste" more aptly applies. I do not recall having seen very many emergency cases brought to the hospital where sedation, rest, rebuilding seemed to be out of order. The inexperienced man may think the best interest of the patient demands immediate action. The family may be demanding immediate action, and sometimes much difficulty is encountered in establishing a program of what appears to be "nothing." Yet experience must be our guide and our better judgment will tell us that so long as we still have a living patient, we are better off than to have proceeded hastily unwisely.

The question as to who should do the surgery on these cases is another consideration. Shall the county seat surgeon, that is the general surgeon living in the smaller cities do this work provided a good hospital is available, or should all these cases be referred to the obstetrical surgeon of the larger medical centers. With proper facilities, the general surgeon is as well qualified to do this work as the obstetrical surgeon and

one cannot get away from the demands of good surgical technique no matter who does the operating. Perhaps the selection of cases might be better accomplished by an obstetrical surgeon, but these cases are usually referred cases in any event and this paper being largely a plea for better selection of cases, certainly both the obstetrician and the surgeon should consult, should agree on a program and the man best qualified to do the actual surgery should be designated. We must admit the smaller cities of today have excellent hospitals and that the men practicing in these hospitals are in most instances alert, well qualified and well equipped to cope with most any condition except the very unusual.

Much discussion has gone before us when the question of indication for section has been brought up. It has never been settled whether or not a line of demarcation can be shown which will indicate when to operate and when not to operate. Certainly one cesarean in each 428 deliveries coming to one hospital is a small number of sections and with this the maternal mortality rate would indicate poor selection or the overlooking of indications, seemingly only desperate cases being taken to the operating room.

First, let us attempt the enumeration of those conditions which the large majority can agree upon as being indications for section:

(1) Disproportion between passage and passenger. This may be due to (a) flat or contracted pelvis, or (b) tumor mass in pelvis. (2) Previous cesarean section. Test of labor shows no progress. (3) Placenta praevia, central. (4) Abruptio placentae. (5) Extreme cardiac disease with decompensation. (6) Previous rupture of uterus. There will be some who will not accept all the foregoing, but the majority will.

Second, let us consider those conditions which probably will call for cesarean section as the program of election. Here we include: (1) Toxemia of pregnancy, in primipara in the latter part of pregnancy, where rest in bed and medical treatment has shown no improvement or where improvement was transitory; (2) Patients who have had two or more diffi-

cult or protracted labors with no living child, and (3) Transverse presentations, especially if impacted.

Then one must also mention those cases where none of the above indications exist and where one would be tempted to do a version if it were not for the fact that great insistence is had that a living child should be delivered. Version carries a high risk to the child and unless contamination of the mother has been done certainly section has more to offer us than version.

Realizing that it is impossible to present in one paper more than a few of the essential considerations of cesarean section, one finds it necessary to leave out much they would like to include. Anesthetics are an important consideration. Certainly the same judgment in selecting an anesthetic in section is required as in any major surgical procedure. Ether is still a valuable anesthetic and unless contraindicated as in pulmonary cases, is usually acceptable and dependable. Ethylene, nitrous oxide and oxygen are excellent anesthetics but require a good equipment and an experienced anesthetist if the proper relaxation is maintained with safety to the patient. Spinal anesthesia unless contraindicated as in a worn out and exhausted patient or for some other accepted contraindication, is our choice. Sacral block using 70 cc. of 1 per cent novocain in the sacral canal, supplemented by an infiltration in the upper abdominal wall proves very satisfactory and in most any case it is possible to proceed with local infiltration throughout the entire operation. Anesthesia is an important consideration and the anesthetic which best applies to the occasion should be selected.

My personal experience with cesarean section shows 97 cases with two maternal deaths and four fetal deaths. One infant was dead before operation, there being a twin pregnancy, this child showed evidence of having been dead for some time preceding delivery; the other child lived. This was the mother's second cesarean section in my care. A second fetal death was due to the necessity of a cesarean operation when the mother was a little more than 7 months pregnant, had an

eclampsia and an impacted transverse presentation. This patient had the hardest labor pains I ever saw. She was one of the maternal deaths, dying of pulmonary edema the third postoperative day, the baby dying the following day.

The second maternal death followed section done after patient had been in labor for seven days, an osteopath trying all this time to deliver her. He had made frequent vaginal examinations, attempted to dilate and apply forceps, had given the patient no rest periods, and had permitted her to become not only exhausted but dehydrated. My first examination showed an impacted, transverse presentation. The mother was put to bed in hospital, given vaginal antiseptics, fluids and carbohydrates and every effort made to produce perfect rest for 48 hours. Cesarean section was then done. The baby was delivered dead, and the mother died one week later, of acute dilation of the stomach.

The fourth fetal death followed delivery by section about 6 hours. The patient was a primipara with severe toxic symptoms classifying her as pre-eclamptic. She was admitted to hospital with severe headache, blood pressure 170, albumen 4 plus, and edema of the face and extremities. She was kept in bed, her diet prescribed, medical treatment instituted and her edema disappeared, headaches and nervousness left, blood pressure dropped to normal, and she improved in every way except the albuminuria remained the same. Suddenly on the 6th day in the hospital the patient developed a severe headache, blood pressure came up and her urine showed many casts. She was delivered by cesarean, spinal anesthesia, 5 weeks short of term. The baby died six hours later, the foramen ovalae not closed. The mother made an uneventful recovery.

Many interesting cases occurred in this series, but one cannot enumerate all of them.

The type of operation now presents itself as a problem. It requires surgical judgment to select the operation best adapted to the case.

The classical operation is an easy procedure and should be chosen in uncon-

taminated and unexamined cases, which have previously been programmed for cesarean. Its simplicity and the short time required, usually about 25 minutes, make it the operation of election.

The low cervical two flap, while requiring 40 to 50 minutes in ordinary procedure, is usually followed when I have a case which has been in labor very long and the membranes have ruptured, especially if any previous examinations have been made, either rectal or vaginal. This operation is preceded by the application of 4 per cent mercurochrome into the vagina under pressure and in sufficient quantity to cover well all the lower birth tract tissue.

Then we have the transverse cervical, which is different from any other operation as the incision, while being to all intents and purposes extraperitoneal, is transverse. A low supra-symphyseal incision is made, exposing the lower uterine segment. A Doyen retractor is introduced and the lower uterine segment well walled off with a long strip of gauze—gynergen or pituitrin is now given hypodermically—the uterine peritoneum, where it is loosely attached above the bladder reflection is incised transversely and the bladder pushed down and the Doyen retractor readjusted so as to protect the bladder. Traction on the uterus to bring it up. Incision in midline of cervix and this extended to both sides with bandage shears. Incision curved up. Deliver baby. The placenta may be delivered through cervix if dilated. Close cervix and now bring peritoneal edge at bladder reflection over and attach to uterus above the uterine incision. Close abdomen.

The fourth operation is the Porro, which was named from an Italian surgeon working in the seventies of the last century, who found contaminated cases doing better if the uterus was amputated at cervical junction than if it was left open as nearly everyone was doing at that early date.

Summarizing very briefly we find:

Infant and maternal mortality rates vary considerably in different parts of the country and some men are making wonderful records in cesarean operation.

We find that indications still serve as an index for our mortality rate.

We find anesthetics are subject to selection and have a definite bearing on the case in hand, and the choice of technique is a matter of surgical judgment and must be made for each case.

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CARDIAC NEUROSES*

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Although the subject cardiac neuroses should very properly be discussed in its various phases by the neurologist or the psychiatrist, my excuse for attempting to discuss this topic is that very few patients primarily consult these specialists but consult their family physician, the internist or the cardiologist.

This condition is unquestionably on the increase, whether due to the present general circulation of literature pertaining to diseases of the heart, or to the conditions of modern life with its ever increasing nervous strain.

The importance of this condition has not been over-estimated, not only because of the real suffering which it causes, but also due to the fact that it is a serious economic factor. All physicians in every line of practice meet with this condition frequently and while the condition really lies in the field of neurology or early psychiatry, probably because of the difficulties of differential diagnosis from organic heart disease, it is doubtless better that the general practitioner see these cases first.

There is a great complexity in the early symptoms of these cases and the most learned authorities differ very radically as to their definition of the neuroses and consequently it is hardly to

be expected that an internist should presume to attempt a classification. However, I believe that most of our careful practitioners know the difference between the neuroses and disease, particularly in organic changes.

It must never be forgotten that in the pure functional disturbances of the heart, there is an understandable mechanism which explains the origin of the signs and symptoms, while in the neuroses the condition is wholly based on emotional and symptomatic misconceptions which give rise to symptoms but not signs of real heart disturbance.

One author divides cardiac neuroses as follows: "Those which occur in persons of neurotic tendencies who have no cardiac or allied pathology, and those which have true pathology of the heart or adjacent organs but who are also the subject of neurotic tendencies and in whom cardiac pathology is entirely independent from the cardiac neuroses. One may also consider as a class of the neuroses those disturbances which originate from the associated diseases elsewhere which give rise to bonafide symptoms or signs and symptoms but which do not originate from the heart as the patient supposes."

In the eyes of the public, death from cardiac disease is supposedly dramatic and sudden; consequently the neurotic individual fixes his attention on cardiac disease. Sudden death, from the standpoint of the physician who has attended long drawn out cases of heart disease, would be most kind and merciful, but this is not so with the neurotic individual who reads frequently articles of the lay press on the subject of cardiac disease.

Fear often plays a prominent part, particularly fear of economic disability. Medical students and nurses of neurotic tendencies, health specialists and other classes with a degree of medical knowledge are affected. Misinterpretation of symptoms lead the neurotic individual to the adoption of cardiac neurosis. Most particularly do diseases of the stomach give the neurotic fear of cardiac neurosis. Gas in the large intestine, a perfectly normal condition, is misinterpreted as cardiac disease. Reflexes from other remote areas are fixed upon as the most

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terribly grave cardiac conditions and it often takes a tremendous amount of argument and demonstration to convince the patient that he has no cardiac disease and probably no serious disorder of any kind. The misinterpretation of the normal functions of the body are very often mistaken for disease for the simple reason that the individual probably had never stopped to consider that the functions and episodes of normal life give perceptible sensations. How very natural that normal emotional demonstrations would be translated as cardiac disease.

While symptoms of cardiac neuroses are predominantly of a subjective character, this also exists in most other forms of organic neuroses. These subjective symptoms include every possible variety of sensations up to severe anginal pain with its characteristic radiating into the neck, arm and back. Very frequently the patient complains of the heart pounding, fluttering, palpitation or throbbing in the ears, temples and back of the head. A common form of unpleasant-sensation is the thump that follows the premature beat when they tell you it feels as if their heart "turned over." Occasionally they have the sensation of the heart not beating, a feeling of breathlessness and of inability to take a long breath, without any actual dyspnea even on exertion. All of the subjective symptoms can, of course, happen in organic disease of the heart.

Generally when actual pain is complained of, it is rarely referred to the retrosternal region. Usually it is located over the apex or over the left chest and is generally made up of darting pains and twinges but the boring constricting character of real anginal pain is absent and there is, as a rule, no relationship between pain and exertion. In most cases its differentiation is not difficult; however in some cases it is most difficult.

A change in the heart rate is much the commonest symptom; the rate is generally accelerated and tachycardia generally responds to any emotional disturbance. However, there are instances when the heart beat is materially slowed in response to emotion. With the tachy-

cardia there is sometimes a throbbing of the whole precordium as in anger and fright. Premature ventricular systoles occur. Evidence of excessive vasomotor lability are present in most patients in the form of ready flushing in response to even slight emotional change.

Suggestion plays a very prominent part in cardiac neuroses. Occasionally physicians who are either too loquacious or who wish to commercialize the neurotic tendencies of an individual do untold harm by what they suggest. For instance I have a patient at this time who several years ago was examined by a doctor who, after listening to her heart for a short period, removed his stethoscope and said very dramatically: "My! what an interesting heart." This patient has since been examined by numerous competent physicians who have all assured her that she has no cardiac disease, but she keeps repeating to them whenever she is examined, "If I have no disease of the heart why did Dr. ——— say that I had an interesting heart?"

I think the main difference in the attitude of the cardiac neurotic from the patient with true disease, especially those simulating angina, is that the victim of neurosis shows fright or emotional anxiety, while the true sufferer presents an aspect of true physical distress being grey or pale, often dripping with perspiration, breathing slow and irregular, the pulse not quickened or irregular, but slowed, difficult to feel and of very small volume. All kinds and varieties of pain are complained of, the patient's education, experience and observations having considerable to do with the variety of symptoms that he has and to the superlatives used in describing them.

Insomnia is often pronounced in these patients. The suspicious and apprehensive patient fears to go to sleep, fearing he might die in his sleep and miss the highly dramatic possibility of dying in some prominent place of meeting.

DIAGNOSIS

The diagnosis of a cardiac neurosis is often a very difficult process and can only be reached after much study and thought; it must never be forgotten that

any neurotic person may suffer from true organic cardiac lesions. If an error is made in either direction the treatment is almost certain to be disastrous to the patient. The most important thought in every case is the complete exclusion of cardiac defects by every means at the physician's disposal. Where we may have certain organic lesions there also may be added to these a neurosis. The patient having some degree of organic trouble plus a neurosis should always be told of the organic condition as we may be sure some other physician later consulted will tell her and a great deal of harm will be done, as the loss of confidence and trust is not good for these cases.

A very important point in the diagnosis of a cardiac neurosis is the establishing of a basis or reason for a cardiac neurosis and it very often takes a skilled psychiatrist to recognize the cause. The history of being a sufferer of other neurotic conditions. The dramatization of his condition now and at other times. Suggesting the stigmata of neurosis.

TREATMENT

A great deal depends, in the therapeutic result of treatment in these cases, on the attitude of the physician. We must bring to bear on the problem all that we know by experience and training and, with sympathetic care, try to comprehend the obscure and tangled processes of the human mind; it is in these cases we feel our deficiencies in psychiatric training. Many times we recognize the psychic factors, but are at a total loss as how best to deal with them. Some of the cases are more or less simple; when we have explained the reason of certain symptoms, that the heart is taking care of the circulation in a proper manner and that the symptoms complained of are not serious, this reassurance many times may be all that is needed. At other times the problem is very difficult and it has been my experience the assistance of a psychiatrist is very helpful as well as necessary. However, some of these cases are rather difficult as when the psychiatrist is called the patient sometimes has the idea his physician believes

he is becoming insane and resents the associated help. Patients of low mentality are quite likely to take this viewpoint while the intelligent patient fully appreciates his own physician's effort to help him by using council in his case.

There are cases in which it is wise to ridicule the patient and make him ashamed to allow his nervousness and apprehension to wreck his economic possibilities and also spoil all the pleasures of his life. Other patients cannot be ridiculed or we lose their entire confidence. They have to be treated in an entirely different manner. We have to try to teach them the real basis of their complaint and show them how their symptoms may be removed by interest in different lines to replace the introspection and self analysis. They must be shown they can attempt and complete, without the fear of any physical injury or discomfort, various athletic activities which are pleasant and healthful. Physical exercise seems always to be helpful, particularly if it is made interesting.

In many cases the neurosis is really a defense reaction built up to escape the participation in anything with some member of the family. Often this happens to a wife, husband, daughter or son and it is very interesting to note how these cases immediately improve when taking vacations or trips with people who please and gratify the social requirements of the patient. Some of these patients can see the humor in their situation and in this way are very greatly helped.

Among educated patients sometimes it is quite helpful to see if they can acquire a detached viewpoint of their case. Give them something to read on psychology and certain explanations of reactions in other cases and often they will get the viewpoint of their case, however, this sometimes fails miserably; as always in this type of case it is the wise physician who chooses the proper line of treatment. Training, experience and ability are very necessary to be of any assistance to these poor suffering individuals.

It seems to be quite helpful to show these patients that their symptoms are

due to emotional causes rather than disease of the heart itself. You would think that this would be a great relief to the sufferer and sometimes it is, but by some patients their interpretation is that their complaint is imaginary and their reaction is that of resentment. As the reaction of complete faith on the part of the patient is very necessary in their treatment, our helpfulness is generally at an end if the patient loses confidence or becomes resentful; also we cannot explain to the patient his situation so that he will lose his self-respect. This type of patient is not satisfied to be told after a brief examination of his heart that he has no heart disease. These patients come to the practitioner for help. They want to put their confidence in you and they want you to take over their troubles and help them. They have lost their rudder "in the slough of despond" and it is your duty as a physician to take up their burden and bear it on your back.

Where overwork has been a factor in the neurosis, rest and sleep is, of course, of great value particularly in persons whose work embodies emotional stress as in actors, and actresses.

All focal infection and pathological findings of any character should be corrected.

Suggestion of course is very helpful. Psychoanalysis, according to most authorities, has been of considerable help, but in most cases it has not served to clear the patient of his neurotic tendencies and has occasionally been followed by transferring his neurosis to some other part of his body, usually his reproductive system.

In a great majority of these cases it is much to be preferred if they can go on with their regular work, if the work has not been of too severe and strenuous a character and apparently has not been the chief factor in their neurosis.

Where exercise is of such a therapeutic value, hobbies, such as gardening, carpentry and the various outdoor pursuits are often very helpful.

As to the use of drugs in treatment I think they should be avoided unless there is a very clear and imperative reason

for their use as this class of cases will wish some medication for every symptom. Often it is necessary to use some of the hypnotics and sedatives, but they should be discontinued as soon as possible. In my judgment the management of the entire treatment of cardiac neurosis belongs to the realms of psychotherapy.

PROGNOSIS

The prognosis in cardiac neurosis is quite an uncertain affair and these patients adopt substitute neurosis when the fear of cardiac disease has been dissipated.

In patients of hysterical ancestry who have in their childhood been subjected to erratic and emotional discipline from parents who are psychoneurotics, very little can be done. Also when the neurosis has existed over a long period it is treated and helped with great difficulty. Too much solicitude is not good for these patients and very often patients do not cooperate because they have certain discomforts in the proper treatment.

In doing good for these patients I must again say our attitude toward them has very much to do with our ability to help as the tremendous patience and sympathy which we must always have gives us a greater percentage of cures.

The patients which we have cured will ever be grateful to us and the thought of a difficult task well done is often a great compensation.

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Perrott, Collins and Sydenstricker in a study of 2,566 families and including 11,330 individuals found a higher incidence of disabling illness among individuals in the lower-income class in 1932 than among individuals with higher incomes. The highest illness rate is reported by a group which was in reasonably comfortable circumstances in 1929 but which had dropped to comparative poverty by 1932; their rate is 60 per cent higher than that of their more fortunate neighbors who were equal in economic status in 1929 but suffered no drop in income by 1932. (*P. H. R.*, 48:41).

EARLY TUBERCULOSIS IN ADOLESCENCE*

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For a physician to talk before other doctors is a common thing. For a physician to talk to a group of laymen is also fairly common. But for a doctor to talk to a group of physicians, leading citizens and students as large as my audience today is not an every day occasion. Let me say, therefore, that I deem it a great honor to address this session of the Kansas Medical Society with students of the University of Kansas. I hope I may be able to make you feel, as I feel, that the subject I am about to speak on is a tremendously interesting and important subject for physicians and laymen alike, well befitting the occasion. I want to thank you for the opportunity of being with you, and I sincerely hope my visit may stimulate in you a renewed and vigorous desire to make further and continued advances upon our common enemy tuberculosis, until it shall have disappeared from among you.

Why am I here? I believe the reason is two-fold. First of all, physicians, public health officials, and anti-tuberculosis associations know that prevention, control and eradication of tuberculosis is not alone a doctor's problem, or a public health problem, or one for a group of volunteer workers. Even today tuberculosis is the most important disease problem by which we are confronted. It is your problem, and my problem. It is everyone's business. What better occasion than this could be provided, therefore, to discuss briefly how tuberculosis can be detected in young people who are supposed to be healthy?

Secondly, I believe I am here to try to show lay people on the one hand, and physicians on the other hand, that their

wishes and desires in regard to the conquest of tuberculosis are identical. Lay persons want:

1. To avoid acquiring the disease if possible;
2. To have the disease detected early while it is more easily arrested—if it has been acquired;
3. To be assured of recovery and continued health after the disease is discovered; and
4. To avoid giving the disease to others.

Physicians want these identical things in the case of themselves, their families and the public. The medical profession today has at its command the ability and necessary equipment to diagnose tuberculosis in its earliest stages. Physicians are anxious to find this disease when it is showing its first manifestations. Their purpose is not only to treat the sick and render the necessary aid to permanent recovery; they want to prevent the disease, too, if they can. More than any other group, physicians realize the communicability of tuberculosis. Therefore, doctors actually want you to be well and to stay well—this is their business, even if they work themselves out of a job.

People want to avoid tuberculosis; physicians want to prevent the disease. Citizens want to have tuberculosis discovered early; this has been the aim of leaders in the medical profession since the beginning of medicine. Those sick with tuberculosis want to regain their health; who can help them better than the physician? Furthermore, no one—in his right mind—either layman or physician wants tuberculosis spread from a tuberculous individual to a healthy individual.

In spite of the apparent uniformity of wishes and wants by intelligent lay persons and the medical profession, tuberculosis is still the leading disease cause of death between 15 and 34 years of age in Kansas (Figure 1) and in other states of the Union. Why should this be so? Several reasons suggest themselves:

1. Tuberculosis has been so widely spread that even today—after a quarter of a century of anti-tuberculosis work—

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1930 Deaths in Kansas in 15-34 Year Age Group

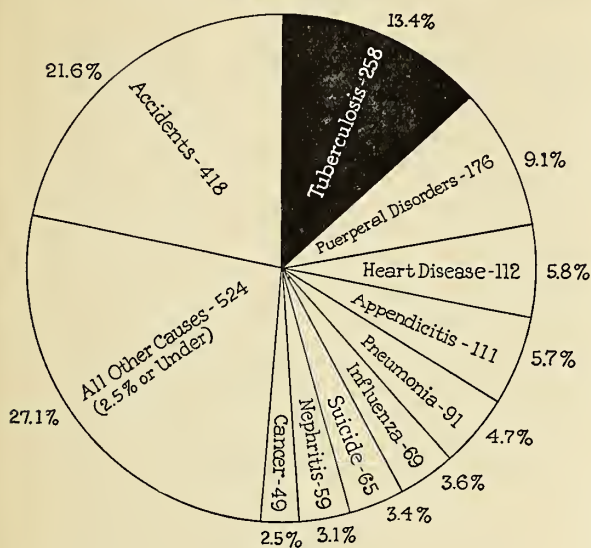


FIG. 1

no community of any considerable size in the country is free from tuberculosis.

2. Tuberculosis may be present but may be so slight or so mild as to be unsuspected or may be mistaken for other less serious disease.

3. Many more cases of tuberculosis exist than are known to physicians, health officers and anti-tuberculosis associations combined. Thus, in Kansas, basing our estimate upon very careful research work elsewhere, there are probably about 6,000 active cases of tuberculosis, or nine for every death—far more than have ever been diagnosed or reported.

4. Early cases of the disease are usually found only after considerable study.

5. Systematic search for tuberculosis among apparently healthy groups of individuals has not been carried on to any great extent.

EARLY DIAGNOSIS NEEDED

I do not mean to say that great accomplishments have not been made in the anti-tuberculosis campaign. They have. Hundreds of sanatoria have been built and thousands of cases of tuberculosis have been discovered at clinics and in the offices of private physicians and sent to these sanatoria. A tremendous amount of health educational work has been done

to teach people how to get well from tuberculosis and how to stay well. But, speaking as a physician who has been interested in fighting tuberculosis for the past 20 years, I know that even yet *most cases are not discovered early enough*. For even *early* diagnosis is not enough; it should be *very early*—even while the individual is still apparently healthy.

This morning I shall not attempt to cover all phases of the tuberculosis problem. However, I would like to tell you how we in Wisconsin are endeavoring to bring together lay groups and physicians for a working method of *finding tuberculosis among the apparently healthy*.

When we start talking methods, programs, or procedures these days—especially when we begin talking about *new* projects—immediately we get up against the basic question of “What is it going to cost?” There are many things we would like to do, many things that ought to be done; but first of all, we must recognize today that money to carry through public and private enterprises is very scarce. If preventive and educational work which we believe in is to be done at all, we must find *economical* ways of doing it, even if those ways are a little revolutionary.

A few years ago, when a child or an adult was suspected of having tuberculosis—even in a very early stage—the first thing that was thought of was a physical examination. Then an *x-ray* was recommended. Then, if there was still reason for suspicion, various other steps were taken including sputum tests, and temperature and pulse studies. In other words, diagnostic study was begun with the procedures like physical examination and *x-ray* which were most costly to the family in money, and to the physician in time. These procedures were best understood and they seemed the best calculated to achieve early diagnosis. For individual suspected cases, this method may still be feasible today. But for *large-scale discovery of tuberculosis in apparently healthy youth, this method is too costly*.

The first and most elementary fact about tuberculosis is that it is a communicable disease, spread by tubercle bacilli. We say that undernourishment, over-crowded housing, late hours and insanitary living conditions are all factors which tend toward breakdown with tuberculosis. This is true. However, none of these factors individually, or all of them put together, could cause one case of tuberculosis *unless the tubercle bacilli were present*.

TUBERCULIN TESTS

"But the germs of tuberculosis are all around us," somebody may answer me. "Everybody has them in his body."

That is the old idea which many intelligent lay people still have. It may have been true in most American communities a generation or two ago; it may still be true in some European and American communities where high tuberculosis death rates and very congested living conditions are the rule. It is not true of the American Middle West of the present time. Studies in Minnesota and Wisconsin, for example, often show that as few as 10 per cent of school children, when studied with the tuberculin test, have ever been infected with tubercle bacilli. Seldom are more than 20 per cent of the children tuberculin positive by the age of 15, especially in rural areas. In a state like Kansas, largely rural and with a comparatively low tuberculosis death rate, probably well under one-fifth of all school children have been infected. And if they have never received tuberculous infection into their bodies, obviously they cannot have the disease at that time. They may be infected later, and get active disease later, but for the time being, and for all practical purposes, they may be ruled out as non-tuberculous.

The first step, then, in an economical procedure of finding tuberculosis in apparently healthy youth is to determine with the tuberculin test whether or not the individual has been infected with tubercle bacilli. The tuberculin test is simple, it is harmless, it is inexpensive. In our largely rural Middle West it permits us to screen out about 80 per cent of all the children under consideration from any immediate further study.

But let me emphasize, reaction to a tuberculin test only indicates *infection* with tubercle bacilli. It does not mean tuberculous *disease*. We must not confuse the terms *infection* and *disease*. They both mean that the body has been invaded with tubercle bacilli; tuberculous infection refers *only* to the entrance of the organism into the host with the formation of tubercles and development of allergy; while tuberculous disease refers to infection *plus* a present or previous manifestation of illness by symptoms, signs or definite changes in some part of the body. Tuberculous disease occurs only after tuberculous infection and it is recognized by the altered function or structure of some part of the body.

TUBERCULOSIS: A FAMILY DISEASE

Every case of tuberculosis requires infection with tubercle bacilli, I have said. Putting it another way, *every case comes from another*. It is usually spread by direct contact between one person and another, as for example, between a mother and a child. In other words, tuberculosis should not be considered only as the disease of an *individual*; it is, to a considerable extent, a *family* disease.

MEDICAL SOCIAL HISTORIES

The next logical step in finding tuberculosis is a carefully taken family and social history. Such a history may be depended upon to furnish between 40 per cent and 60 per cent of the information needed for a diagnosis of the more chronic types of the disease. It also helps to run down unsuspected disease in other members of the family—older persons, for example, who may have been sources of infection for many years without ever suspecting it or being suspected. So, too much emphasis can scarcely be given to the value of a good history in making a diagnosis.

In our search for tuberculosis among large groups of apparently healthy young people in Wisconsin, it soon became obvious to us that while we desired the best type of medical and social history obtainable, its cost was prohibitive. To Dr. Hoyt E. Dearholt, Executive Secretary of the Wisconsin Anti-Tuberculosis

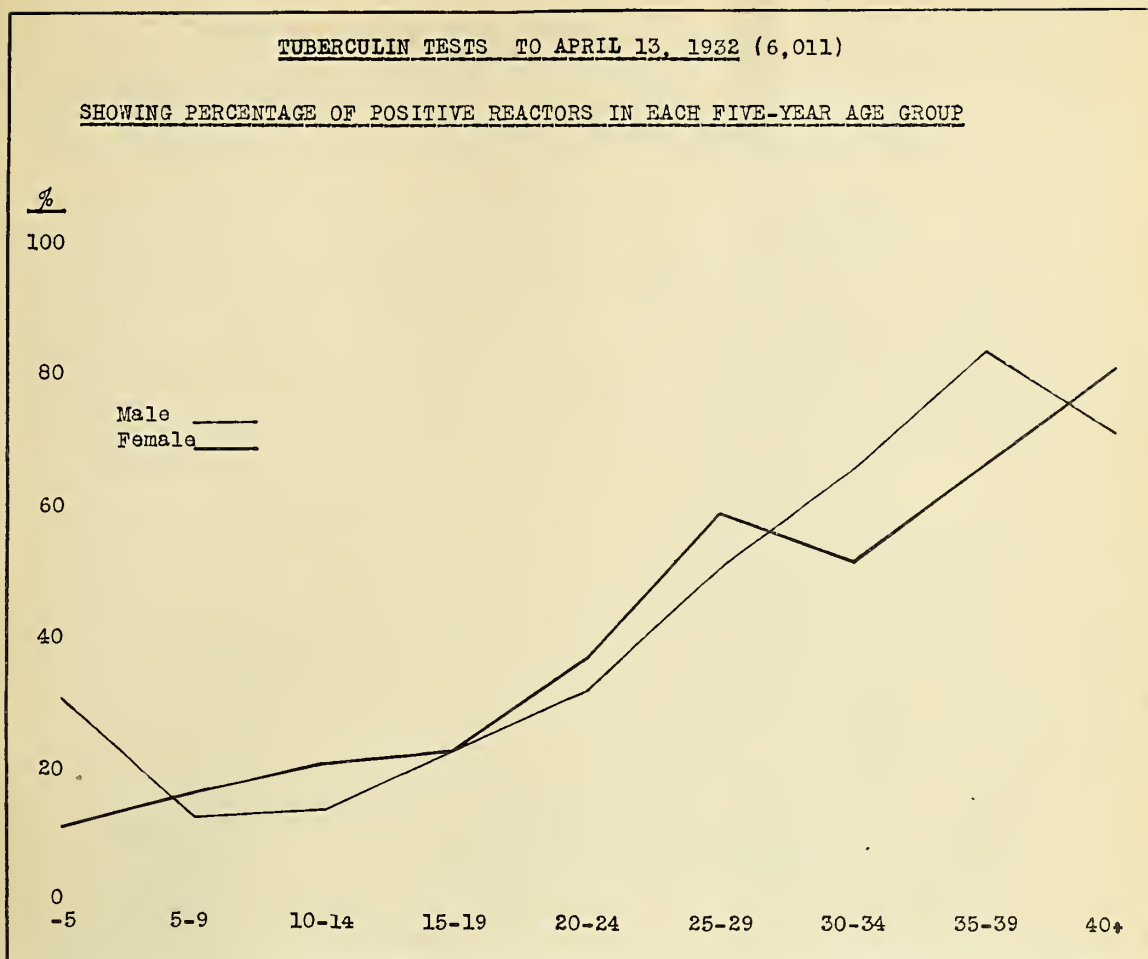


FIG. 2

—Courtesy The Wisconsin Medical Journal.

Association, belongs the credit for conceiving the idea of a socio-medical questionnaire to be filled out by students—a new method of history-taking in which, so far as we know, Wisconsin is the pioneer.

The following points in history-taking are included in the questionnaire: The health of immediate associates; contact with tuberculosis; personal health in childhood; factors which determine one's mode of life; personal history, including previous illness, former suspicious symptoms of tuberculosis, operations, and previous diagnoses; present health, including the individual's own words of explanation of how he feels, symptoms, and chief complaint; extra subjects at school, competitive athletics, work, and indoor and out-of-door recreation; and such other facts which may not have been

asked for but which help the physician to understand the person questioned.

In the younger age groups it is suggested that the questionnaire be taken home and each question answered accurately with the aid of the parents. In school studies, each question is read and explained at assembly and very definite information is imparted in simple words by the physician conducting the study. Other physicians, nurses or social workers aiding in the study assist the individual student in answering questions which may not be quite clear to him.

Used in this way, the questionnaire history can be filled out in an hour or an hour and a half. Large groups of 100 to 1,000 histories can be obtained in this time. Histories taken in this manner are not only procured economically, but the form itself serves as a useful teaching

FINDING TUBERCULOSIS IN APPARENTLY HEALTHY YOUTH--14 STUDIES

STUDY NO.	SCHOOL	AGE YEARS 84%--18 yrs. or under	NO. HISTORIES	TUBERCULIN TESTS			NO. EXAMINED	NO. X RAYED	SUSPICIOUS TUBERCULOSIS CASES					
				NO. TESTED	REACTORS				TOTAL		CHILDHOOD TYPE		CHILDHOOD & PARENCHYMAL TYPES	
											ACTIVE	LATENT	ACTIVE	LATENT
1.	S.P.H.S.	13-24	938	915	188	20.5	296	66	64	6.8	1	56	5	2
2.	S.P.S.T.C.	16-44	436	396	155	39.1	142	41	27	6.0	0	13	5	9
3.	L.X.S.M.O.	2-19	151	151	37	24.5	151	24	11	7.2	2	6	3	0
4.	G.B.S.J.O.	3-17	214	218	17	7.8	214	21	8	3.7	1	7	0	0
5.	N.F.	6-20	97	97	31	32.0	97	18	13	13.4	0	9	2	2
6.	O.S.T.C.	16-31	52	51	10	19.6	52	11	3	5.7	0	2	0	1
7.	W.I.S.G.	11-21	211	194	84	43.3	211	89	62	29.3	3	47	8	4
8.	M.H.S.S.	16-21	248	147	23	15.6	72	13	7	2.8	1	5	1	0
9.	S.H.S.	10-19	389	356	18	5.0	179	11	6	1.5	0	6	0	0
10.	E.G.G.A.H.	6-21	38	38	16	42.0	38	16	15	39.0	1	12	2	0
11.	D.H.S.	12-19	264	145	37	25.5	235	11	11	4.0	3	5	2	1
12.	R.V.S.	14-39	198	184	57	31.0	198	10	10	5.0	1	6	1	2
13.	M.S.T.C.	16-36	42	40	2	5.0	42	0	0	0	0	0	0	0
14.	G.I.S.	5-17	127	123	6	4.9	127	5	4	3.1	0	3	1	0
TOTAL		2-44	3405	3055	720	23.5	2054	336	241	7.0	13	177	30	21

Suspicious Tuberculosis Findings
190 (79%) -- Childhood type
51 (21%) -- Parenchymal type
43 (17.8%) are susp. active
198 (82.2%) are latent or inactive
1.2% of 3405 students "questioned" were classed as suspicious active cases of tuberculosis.

FIG. 3 —Courtesy The Wisconsin Medical Journal.

outline. Each student learns, for example, that every case of tuberculosis comes from some pre-existing case. He is taught the importance of sufficient rest, fresh air, balanced diet, reasonable exercise, and the formation of good health habits. Last, and by no means least important, he is urged to have periodic health examinations.

CHEST EXAMINATION

In searching for tuberculosis in apparently healthy youth, chest examinations are *not* necessary for 70 to 85 per cent of the group being studied. This large percentage of young people do *not* have a history of "contact" and do not react to tuberculin. The search for tuberculosis need be made *only* among the reactors and among the contacts. These two groups should be given a painstaking bare chest examination.

The next steps used in the detection of tuberculous disease are laboratory procedures.

X-RAY EXAMINATION

No diagnostic aid is as valuable in the "further screening" process for the detection of tuberculosis in apparently healthy youth as the fluoroscopic examination of the chest and a well-taken and carefully read *x-ray* film. (Paper films are being used in place of celluloid films in some eastern cities, largely because of their low cost and adaptability for use in studies of this kind. However, they are still in the experimental stage and are not as satisfactory as celluloid films.)

The *x-ray* aids in showing the presence, location and extent of pathological processes. While the fluoroscope will not always aid in detecting early changes due to tuberculosis, and while many films are

difficult to interpret, a correlation of *x-ray* findings with the other available information is usually sufficient for a tentative diagnosis.

SPUTUM EXAMINATION

Search for tubercle bacilli should always be made repeatedly in any case where it is possible to obtain a sample. Unfortunately, in the examination of apparently healthy young people, we have found very few who could furnish a satisfactory sputum specimen. Moreover, when a patient has positive sputum, we are almost always dealing with advanced tuberculosis.

ACTIVE AND LATENT DISEASE

Now that we have separated our cases of tuberculous disease from the larger group showing tuberculous infection, the "fine" screening process comes into play. Whether or not a case of tuberculosis is active is determined by:

1. *Detailed History.* An exhaustive inquiry to supplement the "questionnaire history" may bring to light information which has a very definite bearing on the tentative diagnosis.

2. *Temperature and Pulse Studies* are usually made at four-hour intervals for at least two weeks.

3. *Search for Tubercle Bacilli.* Sometimes properly stained slides from throat swabs show tubercle bacilli. At other times a careful study of the gastric contents in a suspicious case may reveal this micro-organism. Guinea pig inoculations of material obtained from the throat, sputum or gastric contents may be necessary to show the presence of bacilli.

4. *Stereoscopic x-Ray Films.* When indicated.

5. *Re-examination of the Chest.*

6. *Search for Extra-pulmonary Tuberculosis.* Enlarged glands in other parts of the body, possible bone and joint disease, fistula in ano, skin diseases, such as erythema nodosum and lupus are either of tuberculous nature or suggest the presence of tuberculosis in some other part of the body.

7. *Search for Other Infections.* Other infections such as nasal sinus disease, tonsillitis, and carious teeth must be rec-

ognized and ruled out as possible contributing factors in the picture before a definite conclusion is drawn.

8. *Blood Examination.* A comparison of serial differential leucocyte counts and blood sedimentation tests are sometimes of aid in completing the picture of active or inactive tuberculosis.

9. *"Follow-up" as Indicated.* To us, this follow-up study has meant obtaining, in any way, additional information which may be pertinent to the case. It has meant much social service work. It has included the study carried out by the family physician, and it has necessitated much correspondence.

In reaching a diagnosis, impressions are first recorded from the *x-ray* film alone. Then a clinical summary is made from the tuberculin test, the questionnaire history, and the physical examination. Findings resulting from the "fine screening" process are carefully considered, the last step being a final impression gained from all these diagnostic procedures.

YEARLY CHECK-UPS

Earlier in this talk I said that if a child was negative to the tuberculin test, no further immediate study was necessary, as a rule. In about a year, however, a re-tuberculin test should be done on all negative reactors, and children who now react should be put through the same screening process of physical examinations, *x-rays* and other clinical and laboratory tests as I have described.

TUBERCULOUS INFECTION AND TUBERCULOUS DISEASE

Total No. Studied.....(3405)

Total No. Tuberculin Tested...(3055)

TUBERCULOUS INFECTION (720)....23.5%

TUBERCULOUS DISEASE

Suspicious Active (43)..... 5.9%

Suspicious latent (198).....27.5%

TOTAL TUBERCULOUS DISEASE.....(241).....33.4%

(Or 7% of total number (3405) studied)

—Courtesy The Wisconsin Medical Journal.

FIG. 4

All of this study, even with yearly follow-ups of negative reactors, will not guarantee, of course, that every child may be safeguarded against infection and breakdown. A year is a long time in the life of a growing boy or girl; many contacts may be made, many opportunities for infection and breakdown occur. Thus, in Wisconsin, we have sometimes found negative reactors to be diagnosed with active tuberculosis a few months later. In other words, shortly after we studied them, they came into intimate association with an active case of tuberculosis, became infected and broke down with the disease. But this is the thing that is important: they *were diagnosed* within a comparatively short time after they had acquired the disease. The study, and all the educational work that went with it, made the children, their parents and teachers, keenly alive to the hazard which tuberculosis presents to young people, and, as a result, suspicious symptoms were quickly followed up. So we see this case-finding program has more than a mere *case-finding* value at the time: it has an educational value that goes on bearing fruit long after the immediate study is completed.

RESULTS OF STUDIES

Tuberculous Infection Noted—Tuberculous Disease Discovered

Following this procedure, Figures 3, 4 and 5 show the tuberculosis findings in a group of studies made by the Medical Department of the Wisconsin Anti-Tuberculosis Association. A total of 3,405 students filled out questionnaires and 3,055 (89.7 per cent) received tuberculin tests.

Seven hundred and twenty, or 23.5 per cent, of the 3,055 tuberculin tested in these 14 studies were reactors. This series of tests is included in the 6,011 tuberculin tests charted in Figure 2.

As will be noted in Figures 3, 4 and 5, 241, or 7.1 per cent of the 3,405 students filling out questionnaires (or 33.4 per cent of those 720 with tuberculous infection) were found with suspicious tuberculous disease.

Of the 43 suspicious active cases, 13 were of the suspicious childhood type,

and 30 were of the suspicious parenchymal type. In other words, the cases of suspicious active disease were found to be of the parenchymal type almost two and one-half times as often as of the childhood type. The 43 suspicious active cases of tuberculosis represent 1.2 per cent of the 3,405 students who filled out questionnaires, or 5.9 per cent of the students with tuberculous infection.

One hundred and ninety-eight (82.2 per cent) of the 241 with suspicious tuberculous disease were classed as clinically inactive, latent, or probably healed.

Family physicians were sent copies of the physical examination record and the x-ray record of all cases placed in our tuberculosis classification. These students frequently need further study, observation and care by the family physician. A few need sanatorium treatment.

The parents of each child placed in the tuberculosis classification were written to and the findings explained in each instance. We urged that the child be taken to the family physician for further observation and study.

CONCLUSIONS

1. Tuberculosis is still the greatest foe of youth.

2. If tuberculosis is to be discovered early among young people, the search must be begun among apparently healthy youth.

3. Large-scale detection of tuberculosis among apparently healthy youth should be worked out on an *economical* basis, especially in view of the present economic situation.

4. The first step in "screening" apparently healthy youth for tuberculosis should be the tuberculin test. This will probably weed out 80 per cent of the group (negative reactors) from further immediate diagnostic study. The remainder, comprising the positive reactors, may be only *infected* or may be actually diseased.

5. Every case of tuberculosis comes from another. Close associates of a reactor, including family and friends, may be innocent "seed spreaders." Thorough family and social histories should there-

TUBERCULOUS INFECTION & TUBERCULOUS DISEASE

TUBERCULOUS INFECTION - 720

Tuberculous Disease (241)-33.4%	
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TUBERCULOUS DISEASE - 241

Active (43)-17.8%	Latent (198)-82.2%
----------------------	--------------------

TYPE OF DISEASE

Childhood Type (190)-79%	Adult (51)-21%
--------------------------	-------------------

CHILDHOOD TYPE - 190

Active (13)-6.8%	Latent (177)-93.2%
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PARENCHYMAL (ADULT) TYPE - 51

Active (30)-58.8%	Latent (21)-41.2%
-------------------	-------------------

ACTIVE DISEASE - 43

Parenchymal (Adult) Type (30)-70%	Childhood Type (13)-30%
--------------------------------------	----------------------------

FIG. 5

—Courtesy The Wisconsin Medical Journal.

fore be taken of each child under study, and associates with suspicious illness should be studied.

6. Refined diagnostic steps must be intelligently applied to positive reactors to find and differentiate the different types and stages of the disease.

7. Knowledge on the part of physician, public health nurse, teacher, parents and child that tuberculosis is present in a given case, should lead to proper guidance and protection against further development of the disease or spread of the infection to others.

I have spoken of the "screening process," described above, as something of a revolutionary concept in medical procedure. Instead of studying one case, we propose to study thousands. Instead of starting with a sick person, we are starting with apparently healthy young people. Instead of starting with the physical examination and x-ray, we are starting with the tuberculin test. Instead of put-

ting each individual studied through every diagnostic step that medical science knows, we are frankly dropping large percentages of a group studied after each step in the "screening process." And by so doing, we can cut the cost of finding tuberculosis among large groups of apparently healthy young people in schools and colleges to a minimum.

But while the method of procedure may seem somewhat revolutionary, the aims and objectives are not. They are the old, old aims of prevention, of education, of early discovery and early treatment that leaders of the medical profession have held to for many centuries. The change in procedure is only to obtain *better* diagnosis of early stage tuberculosis in the apparently healthy, and at *less cost*. In other words, it is an attempt to best adapt the present knowledge and possibilities of medical science to the needs and circumstances of the times we are living in.

CASE REPORT**Fallot's Tetralogy**

HOWARD E. MARCHBANKS, M.D., F.A.C.P.
Pittsburg, Kansas

The patient, R. B., age 11 years, retired school boy, was first seen by me on the day of his birth at which time he weighed four and one-half pounds. He then looked like he would not live and I made a note on my record that the child was a "poor bet." However, he thrived on a modified feeding of milk and dextro-maltose. He complained frequently of pain in his abdomen until at the age of three years an appendiceal abscess was drained which was followed by a large postoperative hernia. At this time the pulse rate was constantly at 120 to 140, and he was a poor operative risk, but came through in good condition except for the hernia.

When he was six years of age I next saw him. His mother stated he had been short of breath for a long time and that he couldn't play without getting short of breath. At this time a systolic murmur along the left border of the sternum was definitely audible. There was also some degree of cyanosis. A diagnosis of congenital heart disease was made at that time. He had, however, had a severe sore throat about 10 months before but no definite history of rheumatic fever could be made out.

On May 18, 1930, when he was seven years of age, clubbing of the fingers was noted and the systolic murmur at the third left interspace was quite audible and a soft thrill was present in the same area. No special effort was made at that time to make a more accurate diagnosis. He spat blood on one occasion during that year.

On March 4, 1932, I saw him again; he was then nine years old and weighed 52 pounds. Cyanosis was very marked, and there was extreme shortness of breath on exertion. He complained of being too warm. He had been sent home from school the day before because he was so short of breath and so blue the teacher

was afraid for him to remain at school. He, however, enjoyed wrestling and fighting with the other children. He lay flat in bed to sleep and had the habit of sleeping with his head covered. At this time the heart was definitely enlarged and the systolic murmur was heard best along the left border of the sternum.

On June 1, 1933, he was seen again. He had not been to school for over six months. He had begun to sit and watch the other children do the playing. Talking now caused him shortness of breath. He had been having some swelling of his knees with pain on motion. The physical findings were about the same as before.

On September 6, 1933, he was next seen and at this time his usual symptoms were more marked with an added complaint of hives which come out when he is nervous or excited. When he gets ready for bed at night the hives come out on his hands and feet. His mother massages them with alcohol after he quiets down and soon they are gone, and he sleeps all night. He also has complained of weakness the last few months. There has been, however, no special faintness, headache, dizziness, syncope, convulsions, coma, delirium, mania or paralysis or other cerebral manifestations that at times accompany this type of heart disease.

A more careful study of the heart was made at this time and a more accurate diagnosis is offered. One should perhaps reserve the diagnosis until after necropsy, but it seems such a typical case that I feel one is justified in making a "bet on it" as Dr. Richard Cabot would say.

The positive findings are as follows:
Marked cyanosis (blue black lips, blue black finger nails, blue toe nails).

Polycythemia, red blood count 9,430,000; hemoglobin 135 per cent (Sahli).

Marked clubbing of fingers and toes.

Dyspnea on talking or excitement.

Hives appeared on hands and feet as I examined him.

Enlarged left ventricle, enlarged right ventricle.

Systolic thrill at third left interspace along border of sternum.

Loud systolic murmur at third left interspace, heard less distinctly at second right and at fifth left interspace.

No rales in the chest. Liver is palpable below costal margin.

Blood pressure, systolic 100, diastolic 75.

The seven-foot *x*-ray plate of the chest (Fig. 1) shows the typical picture of the heart with the defects described as the

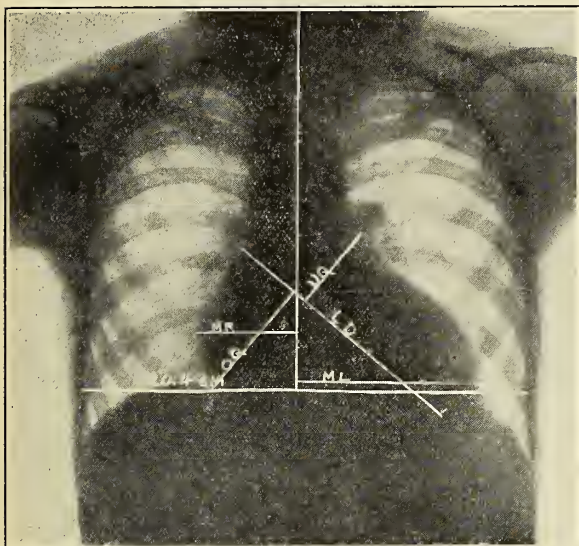


FIG. 1

Tetralogy of Fallot, namely: pulmonary stenosis with defect of interventricular septum and dextra-position of aorta; the fourth element of the tetralogy being right ventricular hypertrophy. The left ventricle is likewise very much hypertrophied.

Measurements:

Width of chest 20.4 cm. Width of heart MR (4.7 cm.) + ML (8.7 cm.) = 13.4 cm.

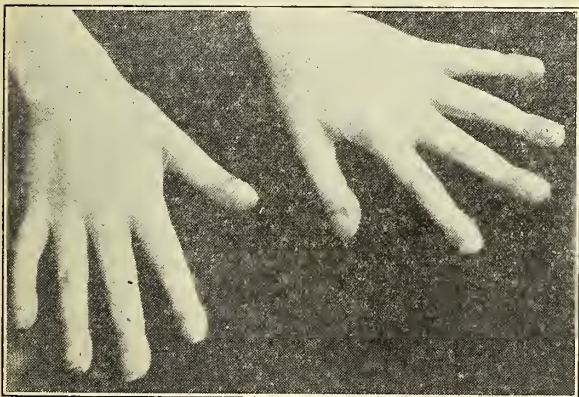


FIG. 2

Transverse Ratio $13.4 \text{ cm.} \div 20.4 \text{ cm.} = .65$ or 65 per cent (Normal 45 to 50 per cent).

Diameter of Base OQ (5.8 cm.) + UQ (4 cm.) = 9.8 cm.

LD—12 cm.

Figure 2 shows a photograph of the marked clubbing of the fingers.

Figure 3 shows the electrocardiographic record with the following findings:

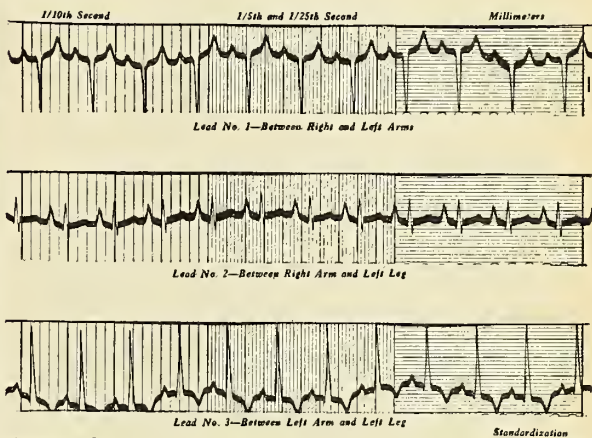


Figure No. 3.

Record No. 1099. R.B. Age Eleven Years.

Electrocardiographic Diagnosis:

Rate 112. Regular Sinus Rhythm.

Right Axis Deviation - Marked. (Standardization Lowered to 7 Millimeters). P-R Interval .18 Second. S-T Interval .23 Second. P in Lead 2 5 Mil. High.

FIG. 3

Rate 112.

Regular sinus rhythm.

Right axis deviation—marked. Standardization was lowered to 7 millimeters in order to get the record on the space.

P—R interval .18 second.

S—T interval .23 second.

P—Lead 2, 5 mil. in height.

The diagnosis according to the criteria suggested by the American Heart Association would be as follows:

A. Etiological Factor:

Congenital heart disease.

B. Anatomical Factor: Tetralogy of Fallot—1888.

Pulmonary stenosis.

Defect of interventricular septum.

Dextraposition of aorta.

Right ventricular hypertrophy.

Left ventricular hypertrophy and dilatation.

C. Physiological Factor:

Regular sinus rhythm, marked cyanosis, dyspnea, enlargement of liver.

D. Functional Capacity:
Class 2B.

Summary: A case of congenital heart disease is reported with a diagnosis made only in vivo of the Tetralogy of Fallot described in 1888.

—R—

**UNIVERSITY OF KANSAS MEDICAL
SCHOOL CLINIC**

**Phenol in the Treatment of Tetanus—
Case Report**

ELDON S. MILLER, M.D.*

This case is presented to illustrate the possible therapeutic effect of phenol in the treatment of tetanus.

On the morning of July 24, 1933, a well nourished, white male, aged 25, presented himself at the University of Kansas Hospital for examination and treatment of "lock jaw." He stated that eight days before he had received a cut on the left index finger while trying to remove a tin can from the hoof of a cow. He went to the doctor to have the wound dressed; iodine was applied locally, the wound was not sutured, and no tetanus antitoxin was given. The wound seemed to heal in the usual manner.

About 56 hours before admission to the hospital, he had awakened early in the morning, noticing that he would yawn every two or three minutes. At breakfast, he noticed difficulty in chewing and soreness in the jaw muscles. The following day the above symptoms gradually became worse. Two days after the first symptoms appeared he came to the hospital in erect posture with marked opisthotonos, anxious expression of the face, and clonic contracture of the masseter, cervical, anterior abdominal and back muscles. He had difficulty in changing from a sitting to an erect posture and the entire body musculature seemed to be more or less stiff. The mouth could not be opened more than one centimeter and it was almost impossible for him to swallow anything more than liquids in small quantities.

PHYSICAL EXAMINATION

The patient weighed 136 pounds; height 68 inches; temperature 102.6°; blood pressure 112/70; pulse 100, full and regular; respiration 22. His clothes were wet with perspiration. The jaws were fixed and there was clonic contracture of most of the muscles, most marked in the jaw, cervical, back and anterior abdominal muscles. There were scattered crackling rales over the entire chest wall, but no dullness. The heart was normal in size; no murmurs; rhythm regular. The entire abdomen was rigid, with marked tenderness in the epigastrium. Kernig's and Brudzinski's signs were positive and suggestive Babinski's sign. Physical examination was otherwise negative.

LABORATORY FINDINGS

Urine: Negative except for a specific gravity of 1.038. Blood: Hemoglobin 103 per cent; red blood cells 4,800,000; white blood cells 6,500; Wassermann and Kahn tests were negative. Blood chemistry: Non-protein nitrogen 35.2 milligrams; creatinine 1.3 milligrams, and sugar 93 milligrams per 100 cubic centimeters of blood.

On admission, July 24, the temperature was 102.6°; pulse 100 and respiration 22. Tetanus antitoxin was given, 10,000 units intravenously, 10,000 units intramuscularly and 10,000 units intrathecally. Spinal puncture was unsuccessful until performed under chloroform anesthesia.

July 25: Temperature 103.2°; pulse 108; respiration 22. Patient complains of severe headache; chokes when he tries to swallow even liquids. Not feeling so well. Muscle rigidity more marked. Spinal puncture was again performed under chloroform anesthesia; 30 cubic centimeters of spinal fluid was drained and 35 cubic centimeters of a 1/400 solution of phenol in normal saline given intrathecally by gravity method. Patient was very restless for several hours following. Fluid intake yesterday was 800 cubic centimeters.

July 26: Patient quite drowsy. Less rigidity of neck muscles. No spasms. Fifteen hundred cubic centimeters of normal saline and 10,000 units of tetanus antitoxin given intravenously. Able to

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take fluids better. Fluid intake 4,025 cubic centimeters. There is a rash on the abdomen.

July 27: Tetanus antitoxin given, 10,000 units intrathecally and 20,000 units by intramuscular route, followed by 1,000 cubic centimeters of 10 per cent glucose in normal saline. Much less rigidity of neck. Has received 80,000 units of antitoxin.

July 28: Profuse diaphoresis. Patient is better oriented today. Fluid output 30 per cent of intake. Pantopon, grain $\frac{1}{3}$, and hyoscine, grain $\frac{1}{150}$, given for muscle tremor. Rash has disappeared, probably a phenol rash.

July 29: Temperature 99.4° , pulse 70 and respiration 20.

August 1: Slight clonic muscle spasms on attempted movement of legs. Mentally clear. Pulse 70-80.

August 4: Still has muscle tremor on attempted movement of legs.

August 5: Patient up in chair. Abdominal muscles still tense. Able to open mouth better and takes fluid without difficulty.

August 7: Able to walk today.

August 8: Temperature 98.6° to 99° ; pulse 80; respiration 20. Patient walking alone, recti and masseter muscles still tense but masseters are gradually relaxing. Nail and entire epidermis of left finger about ready to come off. Patient discharged from hospital.

COMMENT

It is impossible to say how much effect the 80,000 units of tetanus antitoxin exerted on the recovery of this patient, but certainly this dosage is far less than most usually administered to a case of tetanus recovery. It is certain that this patient had a severe case of tetanus and that he showed much less toxicity and that the clonic muscle contracture began to relax shortly after phenol was given intrathecally. The progress was gradual but continuous until recovery from only one injection of 35 cubic centimeters of $\frac{1}{400}$ dilution of phenol. I am familiar with the fact that tetanus toxin forms a rather firm combination with nerve tissue, but it is also known that phenol has a detoxifying effect on tetanus toxin.

Therefore it seems that in any case of tetanus, without nephritis, the phenol treatment is worthy of trial. First, the treatment is comparatively easy to administer; second, it is economical; third, it requires only one injection, and fourth, it appears to be effective.

DISCUSSION

The treatment of tetanus by means of intrathecal administration of $\frac{1}{400}$ phenol is not a new discovery or original with us. Dr. Suvausa of the King Chulalongkorn Memorial Hospital, Bangkok, Siam, reported 10 cures out of 14 severe cases of tetanus admitted to that hospital in the year 1930. Only a few of his cases had received any tetanus antitoxin and that was before admission to the hospital.

Kitasato injected phenol and tetanus toxin into guinea pigs and tetanus did not develop, whereas the controls which received the toxin alone developed the disease and died. Phenol is known to have a destructive action on the tetanus toxin. The possible disadvantage or contraindication of its use would be the presence of nephritis, because of the toxic action of phenol on the kidney; also in individuals who are particularly sensitive to phenol even in dilute solutions. Successive injections of phenol should be given with care.

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Organic Luetin Not Acceptable for N.N.R.—The Council on Pharmacy and Chemistry reports that Organic Luetin (The Abbott Laboratories) is stated to be an extract of syphilitic testicular tissue of rabbits infected with the Nichols strain of *Spirochaeta pallida*. It is proposed for diagnostic use as a skin test "in acute, chronic and congenital syphilis, especially where the Wassermann reaction yields falsely negative results." A control solution, which is an extract of normal testicular tissue of the rabbit, is supplied. After consideration of the evidence for the value of the product, the Council held Organic Luetin unacceptable for New and Nonofficial Remedies because of lack of sufficient evidence for its value and safety and because further experimental work is required before its general use is to be recommended. A report of the Council's consideration was sent to the Abbott Laboratories, and as a result the firm stated that, pending the outcome of experimental work being carried on, the advertising and promotion of the product would be discontinued and no further quantities would be manufactured. The Council commended the Abbott Laboratories for its decision. (*Jour. A.M.A.*, September 16, 1933, p. 929.)

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

In a recent number of Tuberculosis Abstracts, Dr. Esmond R. Long summarized the papers presented before the Pathological section at the annual meeting of the National Tuberculosis Association held in June 1933. In this issue, Dr. Iago Galdston of New York renders a similar service by pointing out the high lights of the discussions of the Clinical section.

Clinical Progress in Tuberculosis

In reviewing the clinical material presented during the 29th Annual Meeting of the National Tuberculosis Association, one is deeply impressed with the fact that the "reaping" stage in tuberculosis progress is now passed and that we have entered upon what might be called the "gleaning" stage.

The advances which we have witnessed during recent years in tuberculosis are largely the result of careful combing of old territories, of critical evaluation and of more skilful application of techniques and procedures which in some instances have been known to us for several decades.

ADVANCES IN LUNG SURGERY

As an illustration of this, we may take the marked advance which has been made in the application of surgery in the treatment of pulmonary tuberculosis. Heretofore surgical treatment of tuberculosis of the lungs has been a rather rare procedure, applied only when other methods failed to produce the results desired. Nowadays surgery is as common as any other form of treatment and is used in conjunction with the rest. In some institutions, as many as 70 per cent of the patients are surgically treated.

The surgical procedures consist of pneumothorax, phrenicotomy, apicolysis, and thoracoplasty. Is it not illuminating that the oldest of these procedures, pneumothorax, was originally suggested by Forlanini in 1882, the very same year in which Robert Koch revealed the tubercle bacillus? The other surgical procedures,

with which the names of Sauerbruch, Archibald, Alexander, and others are associated are also of relatively long standing. These procedures have been known for years but only recently have we begun to apply them with any measure of frequency.

This more frequent and wider application of surgery to tuberculosis of the lungs is undoubtedly due to the general progress which has been made in the field of surgery. The improvements in x-ray technique, the wider choice of anesthetizing agents, and better general surgical technique render surgery in the treatment of tuberculosis of the lung comparatively safe and markedly effective.

TUBERCULOSIS AMONG NEGROES

Progress in this field was reported by Dr. Henry D. Chadwick, *et al*, in a paper entitled "Collapse Therapy in Treatment of Pulmonary Tuberculosis in Negroes." This paper was based on a study of 464 Negroes having pulmonary tuberculosis who were hospitalized during the period from January, 1931, to September, 1932.

Treatment consisted of bed rest supplemented by collapse therapy procedures, which were used in 70 per cent of the cases. Of the patients discharged 28 per cent were arrested and 58 per cent died, but, including those who are still under treatment, favorable results were obtained in 53 per cent. This is an excellent record when we note that on admission 23 per cent were moderately advanced and 67 per cent far advanced, or 90 per cent had advanced beyond the minimal stage before treatment began.

TUBERCULOSIS AMONG INDIANS

A very solid proof of the effectiveness of the anti-tuberculosis measures now furthered by our tuberculosis societies was presented by Dr. R. G. Ferguson in his report on "The Indian Tuberculosis Problem and Some Preventive Measures." According to Dr. Ferguson, in 1931 there were 672 deaths from tuberculosis among the Indian population of Canada. This number represents a tuberculosis death rate of 547 per 100,000, a rate seven and one-half times the average for the total population of Canada.

By the application of standard anti-tuberculosis measures on the Qu'Appelle Indian Health Unit, it was possible to reduce the tuberculosis death rate of this group of Indians to approximately one-half of that rate for the Indian population of Saskatchewan.

FUNGUS INFECTIONS

Returning again to our original thesis, namely, that we have come to the "gleaning" stage of tuberculosis, we may use as a further illustration, the excellent contribution that was made by Dr. David T. Smith of Durham, North Carolina, on the "Diagnosis and Treatment of Common Fungus Infections of the Lungs."

For more than two thousand years, from the time of Hippocrates to the time of Laennec, physicians were at a loss to differentiate between true tuberculosis and those other morbid conditions of the lung which give clinical signs and symptoms closely resembling those of tuberculosis.

Laennec with his stethoscope and with his clinical description of the tuberculous process as shown in the cadaver of post mortem, singled out tuberculosis and separated it from other conditions. However, to this very day, we find tuberculosis confounded with other pathologic conditions and notably with fungous infections of the lung. The fungous infections of the respiratory tract represent a field in which much study remains to be done. As Harry P. Jacobson so aptly says in his recently issued volume "Fungous Diseases—A Clinical Mycological Text:" "It is not at all extravagant to predict that the immediate future holds in reserve a respectable place for the science of mycology—a place commensurate with the importance of the clinical problems which the pathogenic vegetable fungi are known to cause."

On the diagnostic side of tuberculosis and related conditions of the chest, progress has been made in the field of bronchoscopy and in the wider and more skillful application of the x-ray.

Dr. Louis Hamman's paper on "Maligancy of the Lungs and Pleura" and Dr. Kirklin's paper on "Roentgenologic Diagnosis of Mediastinal Lesions" dwelt upon this phase of the subject.

An extremely interesting contribution was presented by Dr. Leo Eloesser of San Francisco, California, in his paper, "Bronchial Stenosis in Pulmonary Tuberculosis." This represents a phase of lung pathology which has not heretofore been much appreciated. Dr. Eloesser's paper, which was beautifully illustrated, made an impressive discourse on the subject.

The papers of Doctors Chadwick, Hamman, and Eloesser will appear in forthcoming numbers of the *American Review of Tuberculosis*. Papers or abstracts of the papers of Doctors Smith, Ferguson, and Kirklin will be published in *Transactions of the National Tuberculosis Association*, 1933.

R

LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy :

I note by your letter that you were surprised that mother and I had gone to the World's Fair, especially after we had assured you boys that times were pretty bad and that a family trip to the Fair was hardly justified. Then after you were safely installed in college we proceeded to go away and enjoy ourselves. To use a slang phrase we put one over on you and hope you will be able to take it. Our only excuse is we were so lonely after you boys left we decided it was the thing to do. Naturally you want to know about the Century of Progress and who but a father should enlighten you. We were in Chicago a week and managed to do about 3 days of active gawking. Our program was one day sight seeing then one day resting tired legs and feet. As you know I have no difficulty in hooking and slicing my way through eighteen holes of golf and am not especially fatigued. But for some reason after walking an hour or two or standing watching the gyrations of thinly clad hula girls for a half hour, the old dogs went completely back on me and your mother always had more or less trouble in keeping me in motion. I know you are going to ask about the Streets

of Paris so I will anticipate your query by telling you I didn't go into this show. The delicious nastiness that was implied by the barker on the outside was a repetition of the hokum put out at the streets of Cairo 40 years ago. At that time I was always first or second through the door after the outside spiel was over.

You will learn after you have been in the practice of medicine forty years that the naked undulations of the female of the species do not thrill as in the days of youth. However, there will always be Streets of Paris and Streets of Cairo and the lads from the short grass and the long grass will go back home and tell the neighbor boys just what gay Lotharios they were in this elevating society. And the family doctor will battle the gonococci and Spirochete pallida through long profitable months afterwards. But why go to Chicago when the same results may be obtained in the old home town and with only the expense of a pint of bootleg. So much for the bizarre. The scientific exhibits from a mechanical and artistic standpoint were wonderful and I do not expect to see anything equal to it in my time. It seems a pity that they will be torn out and scattered to the four corners of the earth within a short time.

The foreign exhibits that I saw were not especially good with the exception of the Belgian Village. This was a little town lifted bodily and transplanted across the ocean wooden shoes and all. Probably the feature that attracted most attention was the fountain in the market place. The source of the water supply was a brazen cherub who voided a virile stream a la natural. As a humorous wag was overheard to say this was the outstanding feature of the Belgian Village. One should spend at least a week at the Fair in order to get properly oriented, as the first 4 days will be pretty thoroughly taken up looking for a free toilet. Nothing is more conducive to rebellion than to have to dig up 5 or 10 cents to drop in the slot of these conveniences, and many a thrifty individual went away from Chicago thoroughly disgusted with the Fair as a result.

It was hard to believe that a nationwide depression exists when one looked at

the 300,000 people who paid admission the first day I was there. All the midway side shows were crowded as were the cafes where a cheese and dry bread sandwich and a glass of beer cost forty-five cents.

The medical exhibit was very complete and while fundamental from the physician's standpoint offered many interesting and instructive features. To the million of laymen who have seen this it certainly has been wonderfully educational. The glass man seemed to get about the best play and there was always a crowd around watching him as he automatically lit up and showed his highly colored plaster paris bowels to the audience. There was nothing obnoxious in the display of this transparent individual and the physiological functions shown were probably pretty well known to the average person. An elongated individual who leaned over my shoulder and had a pronounced halitosis informed me confidentially that this man cost \$10,000. I came back snappily with the information that I had two away at college that had cost me more than that and I also suspected that they were lit up on occasions. He courteously laughed at this and we went our different ways. It took me an hour to explain to your mother that this was simply badinage and had no foundation on fact, that this man probably lived in Georgia and would be above repeating it to his friends. Remember you will always have a friend at court when your mother is around. Which reminds me we went into a down town store to look at shirts for myself and after considerable shopping we compromised on two suits of pajamas and a half dozen shirts for you boys while I got a pair of shoe laces. No doubt you have gotten your quote by this time.

I note the football season is on in full swing but like all Kansas citizens who live too far away to attend the games have lost practically all interest since the autocratic ruling of the coaches that no more games will be broadcasted. I am wondering just what authority they have to do this contrary to the wishes of the many thousands of taxpayers who are unable to see the games but who take great pleasure

in listening in on a snappy description over the radio. I might mention that the Michigan-Ohio game which was broadcasted drew a gate of 93,000. As I understand it these stadiums are located on state property and these sport activities are part of a program sponsored by colleges which are supported by the taxes of the state. Were I a member of the Board of Regents I would make an emphatic protest at this selfish ruling that has been made. The one game that I was permitted to see last year drew a large crowd and as I sat in the stadium big enough to house the Century of Progress I visualized the many thousands who were at home also enjoying the game and in a way getting some pleasure from their tax money. I believe this policy if continued a few years will result in a great loss of interest in the colleges. Certainly the school authorities must realize that a great deal of this interest has been created by sports and sport publicity by means of the radio. It is a regrettable fact but one that we must recognize, that John Citizen is not especially thrilled over the announcement that Prof. Percy Jones will teach the rudiments of sociology the coming semester, but he does get a distinct kick when news goes out that Bull Hagan is back for the college team after a summer's work in a slaughter house. Probably Prof. Jones thoroughly understands the Einstein equations and the Freudian Theory; and probably Bull would be put to the limit to bound Kansas on the west; nevertheless, the fact remains the latter gets the lime-light in this barbaric age. To sum it all up, I'm considerably griped that I didn't get to sit back in my easy chair, bite nervously on my pipe stem and listen in on the Neb-Aggie game, and if an old fellow of my age feels this way, I very naturally have great sympathy for the younger individuals who must suffer proportionately greater.

We were very glad to get your air mail letters. Personally I find a 3 cent stamp accomplishes about the same purpose.

Love,

DAD.

THE PHYSICIAN'S LIBRARY

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume 13, No. 4. (Mayo Clinic number, August, 1933.) Octavo of 215 pages with 65 illustrations. Per clinic year, February, 1933, to December, 1933. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

This volume, the Mayo Clinic number, has 31 contributors presenting many interesting clinical reports.

Dr. Judd and his assistants discuss cases of hypertrophic stenosis of the pylorus, chronic duodenal obstruction, retroperitoneal tumors and dermoid cysts of the abdomen. Dr. Figi reports treatment of several malignant conditions of the mouth and face. Neurological treatment of muscular spasms is taken up by Dr. Adson. Dr. Walters emphasizes the value of the Torek operation for cryptorchidism after a series of eighty operations of this type performed by him since 1927. Dr. Lundy discusses spinal anesthesia with procaine solution and the use of ephedrine therewith which he advises. Doctors Chas. Mayo and John R. Phillips report their results in the treatment of 31 cases of acute intussusception.

As usual this Mayo Clinic number is very instructive and the variety of cases presented have been well chosen.—M.B.M.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month) Volume 16, No. 6. (Mayo Clinic Number—May 1933). INDEX NUMBER. Octavo of 239 pages with 28 illustrations. Per Clinic year, July 1932 to May 1933. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

Walter C. Alvarez, M.D., makes the statement in his article on Digestive Disturbances in Relatives of the Insane that perhaps one out of every hundred of our population are either insane, definitely psychopathic, epileptic, feeble-minded, or nervously inadequate. These patients complain of digestive disorders due to their inherited nervous instability. He describes eight cases in which psychotherapy did the patients much more good than any symptomatic treatment of the intestinal tract.

Nelson W. Barker, M.D., discusses postural hypotension; gives the symptoms,

diagnosis and treatment with review of one case.

Philip W. Brown, M.D., in his article on Diagnosis and Treatment of Certain Types of Colitis and So-Called Colitis, discusses tuberculous colitis, chronic ulcerative colitis, amebic colitis and diarrheas of undetermined origin. In each he gives the diagnosis, symptoms and treatment.

Doctors William A. Plummer, Austin C. Davis and Edward H. Rynearson have an interesting article entitled "The Misleading Initially High Basal Metabolic Rate."—C.K.S.

MIGRAINE DIAGNOSIS AND TREATMENT, by Ray M. Balyeat, M.A., M.D., F.A.C.P., Associate Professor of Medicine and Lecturer on Diseases due to Allergy, University of Oklahoma Medical School; Chief of the Allergy Clinic, University Hospital; Consulting Physician to St. Anthony's Hospital and to the State University Hospital; President of the Association for the Study of Allergy 1930-1931; Director, Balyeat Hayfever and Asthma Clinic, Oklahoma City, Okla. 242 pages, 26 illustrations, 5 of which are in color. Philadelphia, Montreal and London, J. B. Lippincott Company. Cloth \$3.00.

The author has very satisfactorily gotten together a complete review of the literature early and recent on the subject of migraine. To this he has added a rather large number of his own cases. He has shown very interestingly the very definite occurrence of migraine according to the Mendelian hypothesis. It may be said that the author is apparently too enthusiastic concerning the specificity of food elimination in the treatment of migraine. With all, the book is quite readable and a satisfactory treatment of the subject.—A.J.B.

THE DISEASES OF INFANTS AND CHILDREN: by J. P. Crozer Griffith, M.D., Ph.D., Emeritus Professor of Pediatrics in the University of Pennsylvania; Consulting Physician to the Children's Hospital, and St. Christopher's Hospital for Children; Consulting Pediatricist to the Woman's, the Jewish and the Misericordia Hospitals, Philadelphia, and A. Graeme Mitchell, M.D., B. K. Rachford, Professor of Pediatrics, College of Medicine, University of Cincinnati; Medical Director and Chief of the Staff of the Children's Hospital Research Foundation; Director of Pediatric and Contagious Services, Cincinnati General Hospital. 1155 pages with 281 illustrations. Philadelphia and London: W. B. Saunders Company, 1933. Cloth, \$10.00 net.

This new one volume edition of Griffith and Mitchell should be even more attractive to anyone dealing with children than the last edition which was two volumes. It has been condensed by abbreviating

historical references, shortening sentences, and eliminating all material which could be spared without a loss. Nothing of value has been omitted and all the latest pediatric literature has been incorporated. This book is concise, readable, covers the entire field of pediatrics and can be highly recommended as one of the most complete books on children for any physician.—B.I.K.

INTERNATIONAL CLINICS: A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene and other topics of interest by leading members of the medical profession throughout the world; edited by Louis Hamman, M.D., visiting physician, Johns Hopkins Hospital, Baltimore, Md.; volume III. Forty-third series, 1933. J. B. Lippincott Company. Subscriptions accepted only for the calendar year. Issued quarterly. Price, \$3.00 per volume.

In this third volume of the International Clinics we have another very interesting and valuable book. Dr. Russell Wilder discusses the diagnosis of parathyroid over-function; collected the historic considerations by other men, giving history, diagnosis and treatment. Dr. John Morton gives a case history with treatment of a case of hyperparathyroidism. Dr. Read Ellsworth gives the diagnosis and treatment of parathyroid under-function; a very interesting chapter on diagnosis and differential diagnosis. His consideration of etiology and treatment is well worth one's time to read. Dr. Lewellys F. Barker gives a case history and a complete discussion of a case of Thyreohypophyseal syndrome of long duration, and a very detailed comment on the relation of the disease of the hypophysis to hypothyroidism. Dr. Henry Jackson, Jr., gives one of the best discussion of agranulocytic angina one could ask for, differentiating it from malignant neutropenia of sepsis, and gives two cases of each with treatment. Dr. Thomas P. Sprunt gives a very interesting article of infectious mononucleosis (glandular fever). Dr. James Smith's article on pellagra gives a very comprehensive discussion of the etiology, pathology and treatment with special discussion of vitamin G. Dr. Frank Evans' article on planning treatment for over-nourished and under-

(Continued on Page 449)

THE JOURNAL

of the

Kansas Medical Society

EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

CANCER CURES

The Bureau of Investigation of the American Medical Association has recently issued a pamphlet of 33 pages on "Cancer Cures and Treatments." The pamphlet describes the history, business methods and claims of 39 "cures" or "treatments", many now being out of existence.

It is reported that not a week passes but the Bureau receives one or more letters in which the writers claim they have discovered, or possess, a sure cure for cancer and request the American Medical Association to investigate their product. Each correspondent is informed before an investigation will be made certain elemental requirements must be met. A complete statement must be made of the composition of the remedy, including not

only the name but the quantity of each ingredient for which therapeutic action is claimed. The names of at least 25 persons who are claimed to have been cured of cancer by the product in question, and the names and addresses of the physicians who diagnosed the cases as cancer must also be submitted.

Although hundreds of letters have been received from persons claiming to have cures for cancer, not one has fulfilled the requirements set by the Bureau. The correspondent, however, is also informed that if the data are furnished, it will not be accepted in confidence, but will become part of the Association's records, to be passed on to those who may inquire about the product.

For years, medical science has worked on the problem of finding the cause, and developing a treatment for cancer. As yet, the ultimate cause has not been discovered. However, it has been definitely shown that cancer when taken in the early stages, may be cured by competent surgical treatment and, in selected cases, by the use of radium and *x-ray*.

No scientific evidence has been presented to show that any serum, drug, or combination of drugs will cure cancer. Various types of drugs have been used, both for internal administration and local administration, by injection or by the application of caustic pastes. More progressive members of the medical profession have abandoned the use of caustics in the treatment of the so-called "external" cancers; the reason being that the action of caustics is not easily controlled and much better results are obtained by the judicious use of surgery, radium and *x-ray*.

"Cancer Cures and Treatments"* is a valuable publication. Each physician should have a copy on the table in the

*The pamphlet may be secured from the American Medical Association; the cost is fifteen cents each.

reception room of his office. Patients will thus have an opportunity to determine the facts in regard to unwarranted claims of cancer cures.

FREE WHEELING IN THE TUBERCULOSIS MOVEMENT

Steadily, for more than a quarter of a century, the number of deaths from tuberculosis has grown less. In 1900 the death rate from this disease was 202 per 100,000 population. This rate has declined on an average of about $4\frac{1}{2}$ points each year so that in 1930 the rate was 71 per 100,000 population. Until the beginning of the depression this favorable trend was attributed by health officers mostly to a steadily rising plane of living of the American people. Other factors, of course, were given due credit, but what could be more logical than to assume that tuberculosis, a disease known for centuries to go hand in hand with poverty, should decline with the rise in wages, better housing, more abundant food and more leisure time?

But suddenly our prosperity buckled a wing or something, and spun off into the most desperate depression this country has ever seen. No wonder that from various quarters one heard the prediction that the tuberculosis death rate would rise. Actually a strange thing has happened. During the four years of depression deaths from this disease have continued to decline. There stands the record of the past four years. It gives us no inkling of what may happen in the future but it is a strange phenomenon. How can we account for it? Have our previous teachings been wrong or is there something unusual about this particular depression?

Of all the explanations offered the one which seems most probable is that the momentum of the tuberculosis movement has been carrying us through just as the

free wheeling device on the auto enables the car to speed on for some distance with a minimum consumption of gas. Thirty years ago tuberculosis was permitted to run its course almost unmolested. Then in 1904 a few courageous doctors dared to challenge the old enemy. That set in motion the popular movement which since then has built in this country more than 600 sanatoria, established diagnostic clinics in nearly every community, mobilized an army of public health nurses and broadcast knowledge about tuberculosis to the remotest corners of the land. Thanks largely to the money derived from the sale of Christmas seals the movement gained power year by year. Once going, even the drastic economies of these recent times could not, apparently, stop the good effects.

How long the tuberculosis movement can continue on free wheeling no one knows. Certainly it cannot be indefinitely. In an emergency the American people can do great things. Health departments and sanatoria have continued to function with meager funds. Cheap food, low wages and the loyalty of employees have enabled them to do so. Some doctors and nurses have worked on for nothing more than board and lodging. But that cannot go on. Sooner or later sanatoria if not properly supported will have to close their doors. The patients will be thrown back on their helpless communities soon to die. Well people compelled to live with them will be in danger of getting the disease. Without the watchful care of the public health nurse the control of the spreaders will relax and more disease will follow. And so with the other measures necessary to keep a controlling hand over tuberculosis. On an up grade free wheeling is no good whatever.

Health is won by long-time planning.

Tuberculosis does not kill immediately. Nor can it be kept down by occasional spurts of energy. Only by steady progress can we hope to overcome it.

The object of tuberculosis associations is to keep the tuberculosis machine running—powerfully and smoothly. Lost momentum must be regained. The end of the hard journey to the place where every family can be assured of safety against tuberculosis is not yet in sight. If we roll back now our children will have to re-travel much of the hard earned progress won in the past, and in the meantime many of them will sacrifice their lives. Harsh economy must no doubt still be practiced but when health is at stake penny pinching is expensive business and leads only to more expense. A quick pick-up is the order of the present day. Christmas seals stimulate health work of all kinds and furnish the power to carry on the fight against tuberculosis.—H.E.K.

DEGREE OF SKILL REQUIRED BY DOCTORS INTERPRETED BY COURT*

In a recent decision in a suit against a physician for alleged malpractice, the Supreme Court of Connecticut placed a new and significant interpretation on the universally recognized rule that a physician in the treatment of patients should exercise the average degree of skill, care and diligence exercised by members of his profession in the same and similar localities.

The Connecticut court in its opinion declared that it is not unreasonable to require that the physician have and exercise the skill of physicians and surgeons in similar localities in the same general neighborhood, and that, "*under modern conditions there is perhaps less*

reason than formerly for the restriction of the skill required to that possessed by physicians and surgeons in the same locality, since there is no lack of opportunity for the physician or surgeon in smaller communities to keep abreast of the advances made in his profession and to be familiar with the latest methods and practices adopted."

Excluding entirely the legal angles, this dictum touches on one of the essential factors in the advancement and maintenance of the high standards of medical practice generally.

For years, leaders in medicine have emphasized the importance of constant and continuous effort on the part of members of the medical profession themselves to increase their knowledge of scientific medicine and their skill in the practice of medicine. It has been said that when the physician ceases to try to learn more about the intricacies of modern scientific medicine and to improve his skill in application of that knowledge, he has reached a point where retirement from active practice is indicated.

As the Connecticut tribunal has pointed out, under modern conditions there is little, if any, excuse for any physician not availing himself of the numerous opportunities offered for keeping abreast of the advances and progress of medicine. He owes it to his clientele, as well as himself and his profession, to take advantage of the various ways offered to increase his knowledge and improve his skill.

The fact that the courts—at least this one—have begun to recognize that the difference between good, bad and mediocre medical service is not to any great extent a matter of geography is evidence that those outside the medical profession are not unaware of the fact that the average physician can, if he has the desire,

*Ohio State Med. Jour., March, 1933.

progress and keep abreast of medical advancement. Moreover, it indicates that the public more and more is beginning to discriminate between the physician who shows a willingness to increase his knowledge and improve his skill and the one who does not.

This awakening on the part of the public, as exemplified by the Connecticut decision, would be an added stimulus to every physician to utilize every means to make himself a better physician and incidentally become a greater asset to the community he serves. Incidentally, the physician who is consistently active in medical organization, who attends medical meetings and participates in scientific discussions, is usually most active in keeping abreast of scientific advances. It is usually the non-member who is a lag-gard.

EDITORIAL COMMENT

The suggestion has been well made: "Whenever you give a patient a sample of medicine remove the original label; write your own directions."

On the basis of reports received from 18 states, the Federal Office of Education estimates there will be 80,000 unemployed teachers this year.

The Bureau of the Census reports for 1932 in the United States, exclusive of Texas and Utah, there were 28,240 deaths from all motor-vehicle accidents.

Surgeons from the United States and abroad reported at the annual meeting of the American College of Surgeons held in Chicago last month, 12,746 cases of cancer had been cured in the past three years.

Secretary Olin West reports there are 971 subscribers to the *Journal of the American Medical Association* located in Kansas, and 807 Fellows. The total number of physicians in the state is given as 2,168.

Dr. Claude A. Thompson died on October 2, at Muskogee, Oklahoma, as the result of a self-inflicted gunshot wound. Dr. Thompson had served as Secretary-Treasurer-Editor of the Oklahoma State Medical Association from May, 1909, until the time of his death.

An additional reason for continuing membership in organized medicine is the issuance early next year of the thirteenth edition of the American Medical Directory. The names of members of county and state medical societies and of the American Medical Association are shown in bold type, while the names of non-members are shown in small type.

The Lancaster Optical Company consider the examination of eyes and prescribing of glasses are a part of the practice of medicine and should be done only by a medically trained eye physician. Consequently, their solicitations are confined to oculists. Announcements of the Lancaster Company appear in each issue of this JOURNAL.

A grant of \$58,500 has been given Washington University School of Medicine by the Rockefeller Foundation for the study of the physiology of the nervous system. The fund will provide for a five year research program and expand the work in which various departments have been cooperating for several years. Laboratories in the Oscar Johnson Institute for research will be used. (*J. Mo. St. Med. Assn.*, Oct. 1933).

The National Research Council has announced the formation of a committee for survey of research on the gonococcus and gonococcal infections, in cooperation with the American Social Hygiene Association. Its purpose is to collect, analyze and collate the facts already established and the efforts now in progress to add to knowledge of the gonococcus and gonococcal infections, especially as regards bacteriology, immunity, mechanism of infection, and some of the forms of therapy.

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

When Is Syphilis Cured?

To the physician, general practitioner and specialist, the never-ending argument of when syphilis is cured is a most important question.

It would be wise to consider some of the technical aids in making the diagnosis, their limitations and errors. The complement-fixation (Wassermann) test and the precipitation (Kahn, Kline and others) test do not detect the presence of spirochetes in the body. They are tests for the presence of reagin in the blood, which is a result of tissue reaction. A positive reaction merely determines that this reagin is present in detectable amounts while a negative test shows it has fallen below detectable amounts. There is ample proof that the spirochetes may produce little tissue reaction in some cases, thus a negative serological test; yet the patient may still harbor a certain number of the germs.

The syphilographer who starts on the career of stating to the patient that the cure will require a certain number of injections with arsenic, mercury, bismuth or other chemicals, will soon come to grief. I believe that the physician who assumes the treatment of this condition should plainly state to the patient there is no set and fast rule; it may require weeks, months or even years of treatment. This time element, of course, depends a great deal upon the time the physician sees the patient, and whether it be the first, second or third stage.

The best proof of a cure is a negative serological and spinal fluid test; continued absence of symptoms; failure of contacts to develop the disease and healthy children.

Certainly the mere relief of symptoms cannot be claimed as a cure, such as healing of the chancre within a week, or the disappearance of the skin lesions. Therefore we cannot establish a rule for treatment based on disappearance or relief of the symptoms. We cannot altogether depend upon the serological reactions; numerous reports show this pro-

cedure often is in error. Too often I observe the physician treating in order to secure a negative reaction, a practice which should be discouraged. Further, we know we have some individuals who retain the reagin in their blood for years (Wassermann fast) after a cure, yet they show no symptoms, have healthy children and from all clinical considerations are cured.

Nevertheless, the serological reactions are our best method of determining the status of the patient, with our present limited knowledge of the control of syphilis. The exact picture should be painted to the patient, that everlasting vigilance on his part will be necessary. The patient should be well acquainted with the fact that negatives are only a short chapter in the book and that he must add to these at regular intervals.

Before the dismissal of any patient following a negative blood, he should be subjected to a spinal fluid examination. It is well established that syphilis of the nervous system develops rather late; consequently tests early in the disease are of little benefit. Even with a negative spinal fluid the patient may have neurosyphilis.

Following intensive treatment, with a negative obtained at least six weeks following the last anti-leptic treatment, the patient should be instructed that he should have examinations at regular intervals. The usual routine is for a test to be made at the end of two months, another at the end of six months, one at the end of a year and at least one test during each year of his life.

R

Valerian in Therapy.—Today valerian is recognized as having but little virtue, if any, in disease, such power as it has being largely psychic effects resulting from the impression created by its appeal to the sense of smell. Now attention is again called to this preparation by the fact that the health commissioner of New York has placed the sale of valerian and all its derivatives under strict control, so that they may now be sold only on prescription by licensed physicians and veterinarians. Strangely, however, this control is exercised not because of any remarkably potent value or any lack of virtue attaching to valerian in the field of medicine but simply because its odor is so all pervading, so penetrating and obnoxious that it has come to be the chief constituent of what is commonly called a "stink bomb." Thus the control of valerian is not induced by its medical uses but is instead to be a curb on racketeering in which "stink bombs" constitute a significant part of the materia racketeeria. (Jour. A.M.A., September 23, 1933, p. 1004.)

RECENT MEDICAL LITERATURE

Edited by

WILLIAM C. MENNINGER, M.D., Topeka

THORACOPLASTIC OPERATIONS IN PULMONARY TUBERCULOSIS

This article is essentially an argument against thoracoplastic operations in treating pulmonary tuberculosis. The 44 cases operated upon at the Montefiore Hospital are reviewed individually and results stated after from two to ten years observation. All of the cases were chronic rather than acute, and were considered good operative risks. Nearly all had received therapeutic pneumothorax, but sooner or later this treatment had been impossible because of pleural effusions, pleuritis, etc., hence thoracoplastic operations were performed. Results were as follows:

1. Nine per cent died within the first week after operation.
2. Almost 30 per cent died within a year after operation.
3. About 16 per cent are still in the hospital and 31.8 per cent are treated in the outdoor clinic. Fully 48 per cent of the surviving patients are not rehabilitated to the extent that they can engage in any work whatsoever. At least 80 per cent of the cases derived no benefit from the thoracoplastic operation.
4. Hemorrhage was more common and more severe following the surgical treatment.
5. Serial roentgen pictures of every patient as well as evidence from autopsies showed that no cavity was completely collapsed from the operation.
6. Five patients were fit for some work, but each still suffers from symptoms of active tuberculosis.
7. The authors state the belief that if these cases had been treated along tried methods or had they drifted with no treatment at all the final results would have been much better.
8. The authors further state that they have not observed a patient who when seen several years after a thoracoplastic operation was free from symptoms to the same extent as those who have received

climatic or institutional treatment, with or without artificial pneumothorax.

Ultimate Results of Thoracoplastic Operations in Pulmonary Tuberculosis. Wiener, J. J., and Fishberg, Maurice. Archives of Internal Medicine. 52:341-365. September, 1933.

REPORT OF 29 CASES OF SPIDER POISONING

This article is essentially a report of 29 cases of arachnidism that were seen at Employees' Hospital, Fairfield, Alabama. Arachnidism results from the bite of the black widow spider; the majority of the patients seen had been bitten while using outside toilets though some were bitten while in bed or at work. The writers warn that the most common error is to treat the case as a surgical emergency, because the symptoms produced by the spider bite closely resemble those seen in cases of intraabdominal lesions such as ruptured gastric ulcer. The mental symptoms in such cases also add to the difficulty of diagnosis as the patients frequently are unable to give a history of having been bitten and are in such pain as to be willing to submit to anything that promises relief. The authors advise that any patients brought to a hospital suffering from rigidity of abdominal muscles or rigidity of any other large muscular masses be questioned as to the possibility of spider bite.

Arachnidism: Report of a Series of 29 Cases of Poisoning from the Bite of the *Latrodectus Mactans*. Walsh, Groesbeck, M.D., and Morgan, Wm. G., M.D., American Journal of Medical Science. 186:413-418. September, 1933.

TYPHOID VACCINE IN THE TREATMENT OF CHOREA

The authors describe the treatment of 23 cases of chorea; 11 were girls and 12 boys, whose ages varied from 4 to 12 years, the average being 8½ years. From the point of view of duration, the cases were classified as acute, chronic and sub-chronic. Nine cases (40 per cent) were chronic (duration of the disease about 4½ years); six cases sub-chronic (average duration four months); eight cases were of the acute type, the patients being ill only about 11 days before admission to the hospital. Three patients had cardiac complications of the mitral type; a low leukocyte count was common to the entire group.

Treatment consisted in the intravenous injection of a mixture of typhoid, paratyphoid A and paratyphoid B vaccine, each cubic centimeter containing 500,000,000 of typhoid, 250,000,000 of each paratyphoid A and B organisms, the initial dose being from 0.15 to 0.2 cc.

Of the 23 patients 19 were entirely symptom free when discharged from the hospital. A re-examination of 11 patients several months later showed that eight of them were entirely well despite the fact that over 50 per cent of them were chronic cases. The writers suggest that it is a valuable method of treating obstinate and chronic cases of chorea.

Typhoid Vaccine in the Treatment of Chorea. Capper, Aaron, M.D., and Bauer, Edward L., M.D. *American Journal of Medical Sciences* 186:390-400. September, 1933.

CINCHOPHEN POISONING

Cinchophen, or atophan, and related drugs have been used to relieve pain in certain arthritic conditions and are now being employed freely by the laity without medical supervision. Cinchophen is definitely toxic to the liver cells; not only serious but fatal poisoning may occur. Two cases with observations at autopsy are reported. Clinically the course of the poisoning is one of a progressive although it may be intermittent, painless jaundice. Indigestion often precedes the jaundice and vomiting may occur. All the secretions of the body are bile stained. Toxemia is progressive and general edema appears before death. The fatal dose varies depending upon the susceptibility of the patient. The following conclusions are reached:

1. Cinchophen intoxication causes a type of hepatic damage which resembles acute and subacute atrophies of the liver due to other toxic agents.

2. This toxic atrophy of the liver, if not fatal, is probably followed by some regeneration of the parenchymal cells and may lead to diffuse cirrhosis.

3. An acute gastro-intestinal lesion of a severe type may accompany the toxic degeneration of the liver.

Cinchophen Poisoning. Permar, H. H. and Goehring, H. D. *Archives of Internal Medicine*, 52: 398-409. September, 1933.

The Physician's Library

(Continued from Page 442)

nourished patients should be published in booklet form and handed to every over-nourished or under-nourished patient. It is easily read and full of good points throughout. Dr. Lawrason Brown has an article on the mental aspect in pulmonary tuberculosis, which to the average practicing physician may be quite revolutionary but should be read by all with a great deal of thought. Along with this article Dr. Foster Murray has a short article on rest and management of tuberculosis. Dr. Solomon Strouse has a very fine discussion of the treatment of diabetes mellitus with a table of the food values of the average serving and measures as used in the kitchen. Dr. B. Noland Carter's discussion of the management of acute head injuries should be digested from end to end and kept in mind all the time. There are many other very interesting articles in this third volume and one will find it a very valuable addition to his library.—C.K.S.

THE MEDICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume 17, No. 1. (New York Number—July 1933). Octavo of 324 pages with 65 illustrations. Per Clinic year, July 1933 to May 1934. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1933.

Interesting contributions to this number of the Clinics are: An article by Lewis Gregory Cole, M.D., in which he presents four cases of true hypertrophic gastritis; Spontaneous Hypoglycemia Occurring in the Course of Essential Hypertension, by Doctors Herman O. Mosenthal, Benjamin I. Ashe, Charles A. Poindexter and R. MacBrayer. The authors present a case of essential hypertension which later showed hypoglycemia, a most unusual case as it was followed from November 1919, to death, with autopsy findings in August, 1932.

Dr. A. S. Blumgarten presents an article on Spontaneous Hypoglycemia in Endocrinopathies, gives the symptoms of hypoglycemia with report of three cases; one of dyspituitarism, another due to insufficient adrenal, and the third developed as a premenstrual symptom with probable adrenal insufficiency. It is an especially well written and very instructive article.

For a comprehensive detailed description of the symptoms, physical signs, diagnosis, complications, and sequelae, pathological findings and prognosis with a very specific treatise on treatment, one could not find a better article than Epidemic Cerebrospinal Meningitis in Children, by Dr. Adolph G. DeSanctis. He has reviewed forty-four cases in detail and spent a great deal of time in compiling material for this article.

Dr. J. Epstein has an article on Pertussis and something new in its treatment with gold tribromide.—C.K.S.

THE HISTORY AND EPIDEMIOLOGY OF SYPHILIS: By William Allen Pusey, A.M., M.D., LL.D., Professor of Dermatology Emeritus, University of Illinois. Sometime President of the American Dermatological Association and of the American Medical Association. 110 pages, 38 illustrations. Charles C. Thomas, Springfield, Illinois. Price \$2.00.

A complete and easily read outline of the history and epidemiology of syphilis. The subject is treated broadly and with much literary charm. The chapter on epidemiology is a full statement of the facts, up-to-date, bearing upon the personal and sanitary problems of syphilis. Such complete statement of facts is not to be found anywhere else in one book. Abundantly illustrated; printed on heavy paper, large type. Beautifully bound in Du Pont Fabrikoid Linen Embossed Silver. This book contains important material for every physician regardless of whether he is a general practitioner or a specialist.—E.G.B.

FOOD, NUTRITION AND HEALTH (Third Edition, Rewritten), by E. V. McCollum, Ph.D., Sc.D. and J. Ernestine Becker, M.A., Professor and Associate, of Biochemistry, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland. Published by E. V. McCollum and J. Ernestine Becker, East End Post Station, Baltimore, Md., Cloth, pp. 143. Price \$1.50.

The science of nutrition is one of the newest fields of knowledge to be illuminated through research. The relation between diet and health is now attracting the attention of the medical profession to an extent undreamed of a decade ago. In this book, the authors present the established facts about the relation of nutrition to health in simple, non-technical language. The book is a guide to the application of the science of nutrition to the health problems of the individual. It affords its readers informa-

tion which will enable them to discriminate between fact and fallacy in advice about foods.

—————R—————

PERSONALS—NEWS ITEMS

Syracuse: Dr. C. B. Grissom has been appointed health officer of Hamilton County.

Topeka: Dr. Frederick E. Vest and Miss Ruth Larimer were married on October 10.

Salina: Dr. O. R. Brittain attended the meeting of the Roentgenological Society of America, in Chicago.

Wichita: Dr. J. E. Wolfe has been appointed Director of Public Welfare, vice Dr. E. Hobbs, resigned.

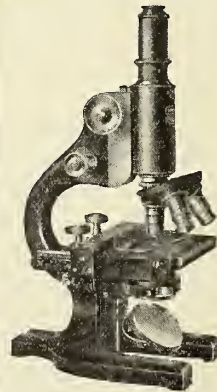
Kansas City: Dr. Harold V. Holter and Miss Martha Louise Lowder were married on November 3, 1933.

Wichita: Dr. W. J. Bierman was critically injured in an automobile accident near Moline, Illinois, October 17.

Great Bend: Dr. E. C. Button has been appointed Barton County Health Officer, vice Dr. Addison Kendall, deceased.

Topeka: Dr. J. C. Shaw sustained a fracture of the right femur in an accidental fall in his garage, October 22.

Salina: Dr. Maurice Snyder, formerly with the Crile Clinic, is now located in Salina and associated with the Mowery Clinic.



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Lawrence: Dr. Arthur S. Anderson, physician for the University of Kansas football team, is recuperating from a recent illness.

Hill City: Dr. I. B. Parker attended the Executive Board meeting of the Kaw Valley Basin Flood Control Association held in Topeka, October 18.

Kansas City: Dr. A. J. Rettenmaier reports the death of one moose and one deer on a recent hunting trip in Canada with Charles Hassig, druggist.

El Dorado: Dr. and Mrs. C. E. Boudreau are attending the Century of Progress Exposition and thereafter expect to be in New York City for a short time.

Lawrence: Dr. Lyle S. Powell attended the meeting of the Academy of Ophthalmology and Otolaryngology in Boston and the American College of Surgeons in Chicago.

Kansas City: Dr. O. W. Davidson announces the removal of his office from 704 Commercial Building to 407-19 Huron Building. Practice limited to Urology.

Kansas City: Dr. Lewis G. Angle was elected to fellowship in the American College of Surgeons and the degree of F.A.C.S. was conferred upon him at their last session in Chicago.

Kansas City: Dr. M. A. Walker, 3700 Strong Avenue, has just returned from a two weeks sojourn in the Mayo Foundation, Rochester, New York, where he spent three years as a Fellow in Surgery.

Ottawa: The Franklin County Medical Society has contracted with the county commissioners to render medical service to the indigent during the coming year. Dr. J. E. Wallen was designated as health officer.

Kansas City: Dr. R. G. Leland, Director of the Bureau of Medical Economics, American Medical Association, has been requested to be present at a dinner meeting on Tuesday evening, November 21, to present an Economics subject of interest to surgeons. Members of the State Society are invited to attend.

The Defense Board

OF THE KANSAS MEDICAL SOCIETY

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Against Suits for Alleged
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COUNTY SOCIETY NEWS

BUTLER-GREENWOOD COUNTY MEDICAL SOCIETY

The Butler-Greenwood County Medical Society met in regular session in Augusta in the Tea Room of the Fifth Avenue Hotel, Friday evening, October 13. A very entertaining and interesting paper with lantern slide demonstration was given by Dr. Claude C. Tucker, of Wichita, on "Anal Fistula and Rectal Abscess."

Dr. Cabeen was with us again and we were very glad to realize that his health is back to normal.

WM. E. JANES, M.D., Secretary.

CLAY COUNTY MEDICAL SOCIETY

Seventy-five physicians and dentists of Clay County and the surrounding territory met at a banquet at the Hotel Tankersley in Clay Center, Wednesday evening, October 11, to honor and felicitate Dr. R. J. Morton, Clay Center, who has practiced more than 50 years in Clay County.

Dr. J. T. Axtell, Newton, a friend of 40 years standing, delivered a fitting tribute to Dr. Morton in which he lauded his fine character, his distinguished medical career and his high standing as a citizen and a statesman. Dr. Axtell related many interesting and entertaining incidents of early medical practice in Kansas. Many friends of Dr. Morton spoke of their

great respect and admiration for him, as a man and as a physician.

Dr. Morton graduated from the College of Physicians and Surgeons in Chicago, and came to Green, Kansas, shortly after 1880. Here, he practiced 36 years and then moved to Clay Center. He has been a man of wide interests and influence. He served as state senator from this district for several years. Twenty-six young men who have grown up in the community in which Dr. Morton has practiced, have studied medicine—a fact of which he is justly proud.

Dr. Jabez N. Jackson of Kansas City, past president of the American Medical Association, addressed the Society and guests on "Cancer of the Breast."

This meeting was declared one of the best ever sponsored by the Clay County Society.

W. H. ALGIE, M.D., Secretary.

RUSH-NESS COUNTIES SOCIETY

The meeting of the Rush-Ness Counties Medical Society was held on September 28 in the office of Dr. N. W. Robinson at Bison. Dr. L. A. Latimer presided. The minutes of the previous meeting were read and approved.

There was no scientific program as the meeting was called to discuss at a round-table conference the problems of each member. The woman at Baise City, Oklahoma, and her "cancer cure" was given thorough discussion as it appeared each member had a former patient who had been there to receive the "cure."

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confidence, Doctor. A wide variety of stocks, intelligent, experienced workmen, and a "NO DELAY" policy enable us to fill them to your entire satisfaction. May we send you our catalog?

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Lancaster

Mrs. Robinson served a delightful lunch which was thoroughly enjoyed by all.

Next meeting will be held in the office of Dr. Brennan in Ness City in November. Guests present were Dr. H. E. Erni of Bison, Dr. Bennett of Bazine; members included Drs. Robinson, Attwood, Latimer, Singleton and Brennan.

W. J. SINGLETON, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The meeting of the Shawnee County Medical Society was held in the Hotel Jayhawk, Monday evening, October 2. President Hall presided.

The guest speaker was W. W. Duke, M.D., of Kansas City, Missouri, who discussed: "The Dawn of a Specialty in Medicine; Allergy and Physical Allergy."

Doctors Orville R. Clark and George F. Helwig were elected to membership. The application of Dr. Donald C. Malcolm of Onaga, was presented for first reading and referred to the Board of Censors.

J. L. LATTIMORE, M.D., Acting Sec.

DEATH NOTICES

BLANKE, THEODORE F., Garden City, aged 72, died May 11, 1933, in Joplin, Missouri, of carcinoma of the face. He graduated from Homeopathic Medical College of Missouri, St. Louis, in 1889. He was a member of the Society.

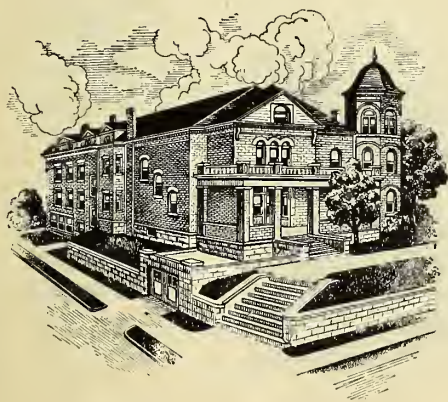
GREEN, FRANK F., Olathe, aged 81, died September 14, 1933, in Bell Memorial Hospital, Kansas City, of lobar pneumonia. He graduated from University of Buffalo (N. Y.) School of Medicine, in 1879. He was past president and secretary of the Johnson County Medical Society and a member of the Kansas Medical Society.

MACGREGOR, JOHN ALFRED, Kansas City, aged 71, died October 2, 1933, of encephalitis. He graduated from Trinity Medical College, Toronto, Ont., Canada, in 1890. He was a member of the Society.

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RALPH EMERSON DUNCAN, M. D. Director



Thirty-seven years of successful operation in the Treatment of Drug and Liquor Toxemias (Addictions) by the original methods of Dr. B. B. Ralph.

Diagnostic Surveys, Special Therapeutic Procedures and Sanitarium Care for Medical Cases. Reasonable Fees.

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PETTITE, GEORGE W., Athol, aged 77, died April 5, 1933. He graduated from Cook Medical School, New York. He was not a member of the Society.

PRITCHARD, WILLIAM W., Wichita, aged 93, died September 6, 1933, of arteriosclerosis. He graduated from University of Nashville, Medical Department, in 1868. He was not in practice at time of his death and not a member of the Society.

SMITH, DEROSTUS E., Kansas City, Kansas, aged 56, died September 2, 1933, of coronary thrombosis. He graduated from College of Physicians and Surgeons, Kansas City, Kansas, in 1900, and Kansas City Homeopathic Medical College (Missouri) in 1901. He was on the staff of the Bethany Methodist Hospital and a member of the Society.

KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

From over the State

All organized counties of the Kansas Medical Auxiliary are at work now on their year's program. Fine year books have been received from Brown, Wilson and Sedgwick counties. The subjects for these meetings all sound very interesting and the State President wishes she might be present at each one of them.

The officers of the different counties are as follows:

CENTRAL KANSAS

Mrs. C. D. Blake, Hays, president.
Mrs. Wm. McK. Brewer, Hays, vice president.
Mrs. E. C. Petterson, Palco, secretary.
Mrs. Ben Moyer, Ellsworth, treasurer.
Mrs. Alfred O'Donnell, Ellsworth, delegate.

BROWN COUNTY

Mrs. P. E. Conrad, Hiawatha, president.

JAMES Y. SIMPSON, M.D.
Neurologist and Addictologist

HERMON S. MAJOR, M.D.
Neuro-Psychiatrist

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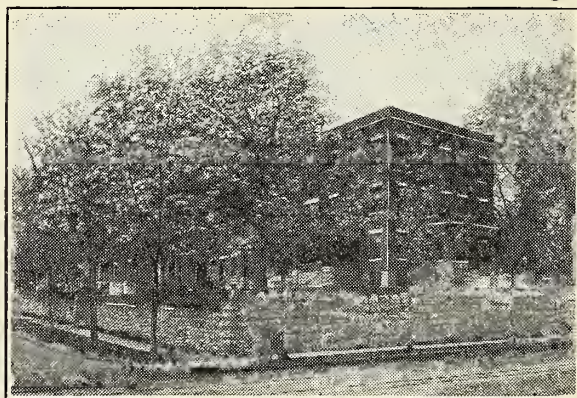
Exercise

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Nervous

Diseases.

Selected

Mental

Cases.

Alcohol

Drug and

Tobacco

Addictions

Beautifully situated in a pleasant residence section of the city. Fully equipped and well heated. All pleasant outside rooms. Large lawn and open and closed porches for exercises. Experienced and humane attendants. Liberal, nourishing diet. Resident physician in attendance day and night.

Mrs. L. C. Edmonds, Horton, first vice president.

Mrs. H. J. Deaver, Sabetha, second vice president.

Mrs. R. T. Nichols, Hiawatha, secretary.

Mrs. E. K. Lawrence, Hiawatha, treasurer.

SEDGWICK COUNTY

Mrs. Henry Tihen, Wichita, president.
Mrs. E. E. Tippen, Wichita, vice president.

Mrs. Fred McEwen, Wichita, secretary.

Mrs. Bruce Meeker, Wichita, treasurer.

Mrs. Carl Burkhead, Wichita, corresponding secretary.

WILSON COUNTY

Mrs. J. W. McGuire, Neodesha, president.

Mrs. A. C. Flack, Fredonia, vice president.

Mrs. B. P. Smith, Neodesha, secretary-treasurer.

MRS. ELMER J. NODURFTH,
State President.

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of August 31 the following have been accepted:

Abbott Laboratories—Abbott's Haliver Oil, Plain, Chloriodized Rapeseed Oil, Ampules Campidol Emulsion, 20 cc.

Gilliland Laboratories—Staphylococcus Vaccine (Albus and Aureus) 5 cc. vial.

Adolphe Hurst & Co.—Metaphyllin—Ampules Solution Metaphyllin, 0.24 Gm., 10 cc.; Ampules Solution Metaphyllin, 0.48 Gm., 2 cc. Suppositories Metaphyllin, 0.36 Gm.; Tablets Metaphyllin, 0.1 Gm.

Lederle Laboratories, Inc.—Fish Glue Allergenic Extract (Lederle).

Mead Johnson & Co.—Mead's Halibut Liver Oil; Mead's Halibut Liver Oil with Viosterol 250 D.

Parke, Davis & Co.—Parke-Davis Haliver Oil, Plain.

Petrolagar Laboratories—Petrolagar (with Cascara, Non-Bitter).

Pharmedic Corporation—Aminophylline-Pharmedic—Ampules Solution Aminophylline-Pharmedic, 0.24 Gm., 10 c.c. Ampules Solution Aminophylline-Pharmedic, 0.48 Gm., 2 c.c.; Suppositories Aminophylline-Pharmedic, 0.36 Gm.; Tablets Aminophylline-Pharmedic, 0.1 Gm.

Radium Chemical Co.—Radium Chloride-Radium Belge.

G. D. Searle & Co.—Aminophylline-Searle—Ampules Solution Aminophylline-Searle, 0.24 Gm., 10

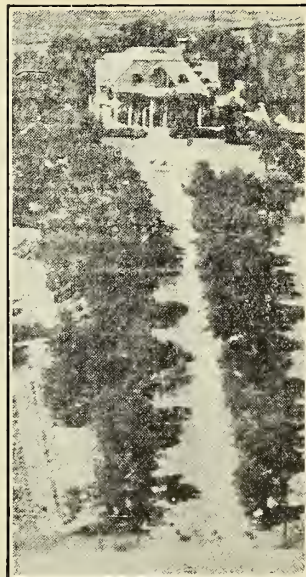
THE ROBINSON CLINIC

The various forms of mental instability may not be classified with ease. The flux and flow of personality-situation conflicts change constantly, and therefore the reaction of the personality is changing. The physician must take these changes into consideration, when he approaches a patient suffering from a functional disease.

We may say that a person is insane who misconstrues his environment. That is, he conceives of changes in people and places with which he comes in contact. Many times, of course, an entirely imaginary environment is built up; other patients only change elements. The neurotic, however, misinterprets some bodily function and then many warp that function to the extent that it actually changes. This is especially true of the cardiac and gastric neuroses.

However, most of us fail to visualize that these changes in the personality are undergoing a more or less free flow and that one type of case may change into another, in response to changes in the environment.

In attacking these cases, this must be taken into consideration. A fluctuating case has a better prognosis than a fixed one. Environmental changes must be used to help turn the patient's mental processes along different channels. This is the most important aid in treatment. All other factors, of course, must be used and the search for the cause and the explanation of it to the patient, is a large factor in ultimate recovery. In the stubborn cases, an expert must usually be consulted in this latter form of attack.



Airplane View

—Courtesy Curtiss-Wright
Flying Service

Nervous and
Mental
Diseases

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Kansas City, Mo.

Drug and
Alcohol
Addiction

G. Wilse Robinson, Jr., M.D.
Assoc. Medical Director

Paul A. Johnson, M.D.
Internist

c.c.; Ampules Solution Aminophylline-Searle, 0.48 Gm., 2 c.c.; Tablets Aminophylline-Searle, 0.1 Gm. ($1\frac{1}{2}$ grains).

Smith, Kline & French Laboratories—Benzedrine—Benzedrine Inhaler; Benzedrine Solution.

E. R. Squibb & Sons—Autolyzed Liver Concentrate-Squibb—False Ragweeds Combined Pollen Allergen Solution-Squibb (False Ragweed and Slender Ragweed in equal parts); Orachs (Shadscale) Pollen Allergen Solution-Squibb (Shadscale, Redscale and Wingscale in equal parts); Oregon Ash Pollen Allergen Solution-Squibb; Ragweed Combined Pollen Allergen Solution-Squibb (Giant Ragweed and Dwarf Ragweed in equal parts); Rye Grasses Combined Pollen Allergen Solution-Squibb (Perennial Rye Grass and Italian Rye Grass in equal parts); Sagebrush Combined Pollen Allergen Solution-Squibb (Sagebrush and Pasture Sage in equal parts); Wormwoods Combined Pollen Allergen Solution-Squibb (Biennial Wormwood, Dragon Sagewort, Dark-leaved Mugwort, and Mugwort in equal parts); Squibb Stabilized Refined Halibut-Liver Oil; Squibb Stabilized Refined Halibut-Liver Oil with Viosterol 250 D.

The following product has been included in the List of Articles and Brands Accepted by the Council But Not Described in N.N.R. (New and Nonofficial Remedies, 1933, p. 437):

Lederle Laboratories, Inc.—Fish Glue Allergenic Extract Glycerinated (Lederle).

New and Nonofficial Remedies

The following products have been ac-

cepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Rabies Vaccine-U.S.S.P. (Simple Method).—This antirabic vaccine (New and Nonofficial Remedies, 1933, p. 371) is also marketed in packages of seven syringes of 2 c.c. each, and in packages of fourteen vials of 2 c.c. each. United States Standard Products Company, Woodworth, Wis.

Ipral Tablets, $\frac{3}{4}$ grain.—Each tablet contains Ipral-Squibb (New and Nonofficial Remedies, 1933, p. 89), $\frac{3}{4}$ grain. (Jour. A.M.A., September 16, 1933, p. 929.)

Extralin.—A liver-stomach concentrate resulting from the interaction of a mammalian liver extract containing the Cohn fraction D and stomach tissue material. It is proposed for use in the oral treatment of pernicious anemia. It is marketed in the form of pulvules containing 0.5 Gm. Eli Lilly & Co., Indianapolis.

Diphtheria Toxin-Antitoxin Mixtures, 0.1 L.—This product (New and Nonofficial Remedies, 1933, p. 375) is also marketed in packages of one vial containing 10 c.c. United States Standard Products Company, Woodworth, Wis.

Antimeningococcic Serum Polyvalent.—This antimeningococcic serum (New and Nonofficial Remedies, 1933, p. 367) is also marketed in packages of one double-ended vial containing 30 cc. United States Standard Products Co., Woodworth, Wis. (Jour. A.M.A., September 23, 1933, p. 999.)

Autolyzed Liver Concentrate-Squibb.—A mixture containing autolyzed liver concentrate 88 per cent, and cocoa 12 per cent. Each gram represents the antianemic potency of from 20 to 30 Gm. of fresh

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mammalian liver. It supplies the antianemic potency of liver in a form that is palatable and convenient. It is also rich in vitamin B₁ and G. E. R. Squibb & Sons, New York, N. Y.

Pollen Allergen Solutions-Squibb.—The following pollen allergen solutions—Squibb (New and Non-official Remedies, 1933, p. 30), marketed in 5 c.c. vials containing 10,000 protein nitrogen units per cubic centimeter, have been accepted: False Ragweeds Combined Pollen Allergen Solution-Squibb (False Ragweed and Slender Ragweed in equal parts); Orachs (Shadscale) Pollen Allergen Solution-Squibb (Shadscale, Redscale and Wingscale in equal parts); Oregon Ash Pollen Allergen Solution-Squibb; Ragweed Combined Pollen Allergen Solution-Squibb (Giant Ragweed and Dwarf Ragweed in equal parts); Rye Grasses Combined Pollen Allergen Solution-Squibb (Perennial Rye Grass and Italian Rye Grass in equal parts); Sagebrush Combined Pollen Allergen Solution-Squibb (Sagebrush and Pasture Sage in equal parts); Wormwoods Combined Pollen Allergen Solution-Squibb (Biennial Wormwood, Dragon Sage-wort, Dark-leaved Mugwort, and Mugwort in equal parts). E. R. Squibb & Sons, New York, N. Y. (Jour. A.M.A., September 30, 1933, p. 1076.)

Foods

The following products have been accepted by the Committee on Foods of the American Medical Association for inclusion in Accepted Foods.

Mary Lou Self-Rising Flour (Bleached) (The Robinson Milling Company, Salina, Kan.)

Gerber's Strained Carrots (Gerber Products Co., Fremont, Mich.) (Jour. A.M.A., September 2, 1933, p. 779.)

Gerber's Strained Peas (Gerber Products Company, Fremont, Ill.)

FOR RENT: Doctor's office in Kansas City, Kansas, on carline, trafficway and U. S. highway No. 73. Dentist in building, drug store downstairs. Other business on corner. Good location. Address Parallel Pharmacy, 2700 Parallel, Kansas City, Kansas.

WANTED: For partner, good, clean, young man, married. Will turn entire business to right party after two or three years. Good town, population 600, with every convenience of city. Address A-564, care Journal.

FOR SALE: Drug store in small town. Small investment required. Address A. E. Halsey, Executor, Brookville, Kansas.

REPRINTS

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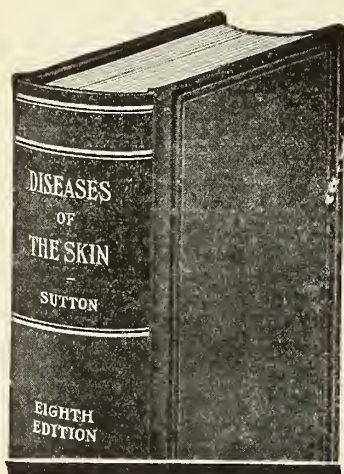
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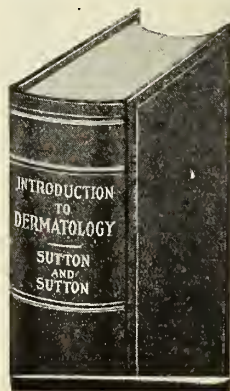
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ORIGINAL ARTICLES

THE HEALTH OFFICER AND THE GENERAL PRACTITIONER*

W. H. YOUNG, M.D.

Fredonia, Kansas

Half a century ago, when health education was in its infancy, the average span of life was 35 years. Infant mortality, tuberculosis, typhoid fever, diphtheria, smallpox and yellow fever were among the heavy contributors to this high death rate. Now each of these has been brought under control in such a manner as to produce the remarkable feat of extending the expectation of life to 59.7 years.

In terms of figures, this means that 25 years have been added to the lives of one hundred twenty million people, or that a total of three billion of years has been added to the lives of all those who are at the present time living under the protection of the flag of the United States. This ought to satisfy the most fastidious juggler of statistics. These enormous results could only have been produced by the combined work of health officer and practitioner. The world looks to the medical profession for even much greater accomplishments in the future.

This gradual growth and development of the public health service calls for a closer association between health officer and practitioner.

In the following discussion of this subject no attempt will be made to deal extensively with the conditions common to the work of the full-time health officer. As fully three-fourths of the health service done in Kansas is by the part-time man, it will be safe to presume that more than half of the physicians of the state

must labor with this type of workers. Strong as the desire may be to see the full-time unit established in each county, the fact remains that it is still necessary for the larger part of the physicians of the state, together with the part-time health officers, to seek the best possible solution for the health problems which confront them in their respective communities.

In most instances the health officer is now, or has been in the past, a general practitioner. This enables him to better understand the medical man's views on the health questions. But not all practitioners have had sufficient experience in health work to give them a correct understanding of all the purposes of the health departments.

It has been argued that "medical practice combined with public health service is an *incompatibility*," and that some of the "physician's training actually *unfits* him for true public health work."

In direct opposition to this statement there is now a growing public conviction that the family physician should be paid for keeping his patients well, instead of curing them after they have become sick. This last theory would automatically make every practitioner a health officer for those under his care. While both of these propositions would at first seem to be radical positions, on careful consideration each will perhaps disclose some reason for its support. It would appear that the full-time health officer who is not engaged in medical practice should have little difficulty in pursuing his work. But like the part-time man his knowledge of medicine and surgery could if not judiciously applied, have strong tendency to lead him out of his own domain into the field of the practitioner, where unguarded suggestions as to why, how, where and even when certain treatments should be applied, might prove very distasteful to the patient and family

*Read before the 75th annual meeting of the Kansas Medical Society at Lawrence, Kansas, May 2, 3 and 4, 1933.

physician. Here the sole duty of the health officer in the clinic work is to get the suspected sick person, who may be endangering or menacing the public, into the hands of his physician through whose instrumentality he may receive proper directions as to the best methods of treatment. All of which is to be accomplished to the entire satisfaction of both patient and family physician. In this type of cases the part-time health officer, who is also a practitioner, has a double duty to perform in which he limits himself strictly to his own patients while acting as attending physician and determining the proper course to be pursued in the way of treatment.

If the physician should entertain the mistaken idea that the aim of the health program is to keep the laity well and thus put the practitioner out of business, then the incompatibility presumption is placed on indisputable grounds and many difficulties are likely to arise. If on the other hand the physician can be convinced of the importance of preventive medicine and led to think that there might be even a larger field open to the medical man by keeping his patients free from disease, there would be little room for opposing health measures in any form. In keeping with some of the present customs, a daily radio broadcast to "see your doctor twice a year," might result in a gain in medical practice which would more than balance the loss brought about by health work.

It is only by joint action that in tubercular cases contacts may be formed between patient and physician and this disease, which was at one time the most dreadful of all death dealing agencies, has been reduced in fatality to less than one-third of what it formerly was. Without question this has been one of the greatest achievements that the healing art has ever made. This has been done by organized activities on the part of the medical fraternity. Tuberculosis societies have been formed in all parts of the nation and by close checking up on all known cases of the disease, the knowledge of the arrestibility and the curability has reached thousands of people

who otherwise would have gone down in despair to an untimely grave.

The Kansas State Tuberculosis and Health Association has played a wonderful part in the clinical work in which the attending physician, through the assistance of field nurses and health officers, has been able to keep in touch with his tubercular patients, keep them out of the hands of quacks and have the pleasure of seeing many of them restored to useful occupations. Here the county health officer can be of valuable help to the attending physician, the patient and the county commissioners in arranging for hospitalization in the state sanatorium.

The same may be said of the Crippled Children's Clinics now working quite efficiently in Kansas, in which the physician in charge, the examiner and the health officer make united effort to direct the patient into the proper hands for most beneficial results. It would unquestionably seem that these three medical advisors would be more able to select the most appropriate place for this work to be done, than would any group of persons who have had no practical training in medicine, surgery or hygiene.

In the question of diphtheria immunization the health officer has an indispensable part to perform in organizing the work to be done in school districts, either by practitioners taking charge of groups, or by forming contact between the patients and the family physician. The keeping of these various physicians supplied with toxoid for this work and sending records of the immunizations to the state board of health is no small part of the duties of the health officer.

May it be said here that there is grave doubt as to whether health officers are within their rights when doing vaccinations or immunizations free of charge for persons who are amply able to pay a reasonable fee for the service. No one has done as much to teach the laity the necessity for vaccination and immunization as has the family physician and no one has a better right to compensation for doing this work than he. The health officer who uses his influence to direct

this work into free service channels or exerts his official capacity toward "raking his own chestnuts from the fire," is doing neither himself nor the public a lasting favor. If the Golden Rule as a code of ethics be properly applied by health officer and attending physician, there need be little reason for friction between them.

The Kansas law requires the attending physician to quarantine and placard the homes of patients and families who are sick with any disease dangerous to the public health. After which he is to immediately notify the nearest board of health. A part of the laity takes offense at any suggestion of being quarantined. In fact very few people enjoy being held under restriction. It means a sacrifice of convenience, pleasure, time and money. Knowing this many hesitate to call a physician thinking to get by in this way without quarantine and, if serious conditions should cause the family physician to be summoned, he is expected to intercede with the health officer to let them off easily. The law places a certain responsibility on each party which if assumed and courteously acted upon will lead to a cooperative course and a friendly spirit which will be a source of satisfaction that duty has been well performed.

In the hearts of all physicians there exists a certain degree of pride in being of service to the public, which enables them to forget private losses which they may suffer at times and continue in their labors recognizing the fact that they, along with the citizenship of the community, are receiving individual benefits from the public health work which may more than repay for the losses sustained.

The principles and practices which form the basis of all health education and instruction are, in most part, those which have been previously worked out under the guidance and observation of the medical investigator. And it is to his profession that the public looks for additional steps in the progress of health activities.

After viewing the question from these different angles it seems most conclusive

that no one other than a physician who has first obtained the necessary medical knowledge and training and thus fitted himself for keeping informed and prepared to make all possible advancement along this line, can successfully carry on in the field of health work and in no other class of workers can there be found men and women who are more willing to make the self-sacrifices which are required to push the work to completion. The familiar statement that the physician is the only man in any trade or profession who is willing to work himself out of a job is fully exemplified in this field. If the full-time health units are ever to become more general it will be accomplished through the efforts of the general practitioner. However, until this is done it will be necessary for the part-time health officer and the general practitioner to act together in the effort to bring about the best possible results in those counties and cities where full-time units are not maintained.

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SOME EXPERIMENTAL WORK WITH RABIES*

GUY E. FINKLE, M.D.

Canton, Kansas

Rabies dates back to ancient times. Aketon, son of Aresteus, died of rabies about the thirteenth century B.C. It was well known in Aristotle's time as he writes: "Dogs suffer from madness—it throws them into a state of fury and they die." Human rabies was well known at the time of Celsus, 100 A.D.

In 1780 La Roux recommended cauterization of wounds of dog bites and treating with butter of antimony.

At one time it was thought hydrophobia could be transmitted by the breath and people who were bitten were in terror of what might be done to them. In 1780 a girl bitten by a mad dog begged that she might not be suffocated. In 1819 the papers told of a rabid person being smothered between two mattresses. These occurrences must have been frequent for in 1810 a philosopher asked the government to enact a bill that "it is forbidden under pain of death to strangle, suffocate, bleed to death or in any other way to murder individuals suffering from rabies. . . ."

In 1804 Zinke transferred rabies from an infected animal to another animal by painting the saliva of the infected dog on a fresh wound of the other.

The work of Pasteur and his co-workers in 1880 to 1888 showed that rabies virus is constantly in the nervous system of rabid animals. He also found that when the virus was used for several passages in rabbits the virulence for dogs was lowered and that for rabbits increased. This virus when dried and re-injected into dogs produced immunity in these animals. He applied this method to the immunization of persons who had been bitten by rabid dogs.

In 1903 Negri discovered small bodies in the ganglion cells of the central nervous system of rabid animals making possible the diagnosis of rabies in 90 per cent of the cases. In the same year

Ramlinger showed the virus of rabies to be filtrable.

Rabies is widespread in the United States and in recent years has been on the increase. In 1890 the census showed 143 deaths in 30 states. In 1908 rabid animals were reported in 525 localities with 111 human deaths; in 1911, in 1,381 localities with 98 deaths in man. From 1910 to 1920 there was an average of 63 deaths a year from rabies in spite of the use of treatment, which would show that the use of treatment has reduced deaths only about 50 per cent.

Not all persons bitten by rabid dogs contract the disease. Cornwell studied cases in which the presence of the disease was determined by the death of one of the persons bitten. He showed that out of 423 cases bitten, but 148 developed the disease, giving 35 per cent who contracted it. Rosenau says "it would seem that rabies develops in not less than one person in 10 bitten by mad dogs and not receiving the Pasteur treatment—that from 15 to 20 per cent is a moderate estimate of the death rate of all persons bitten by rabid animals." Among individuals exposed and untreated Faber found two per cent deaths, Babes 15 per cent, Horsley 15 per cent, and Tardieu, Thamehayn and Bouley give 46.6 per cent. These statistics are compiled by able men of different countries and probably the large variation is due to differences in methods of determining the presence of the disease in the dog.

Bites on the face and arms are more fatal and the incubation period is shorter than when the person is bitten elsewhere.

That rabies can be prevented in most cases by antirabic treatment is an established fact which has been proven and accepted by all investigators in this work. One series of 3,516 antirabic vaccinations by Harris had but one failure.

That there is no cure for this disease when it once develops is a certainty; there are ways, however, to prevent its spread. In England and the Scandinavian countries, it has been entirely eradicated by quarantine and muzzling measures and in Australia it has never been allowed to enter. As the disease is

*Read before the 75th annual meeting of the Kansas Medical Society at Lawrence, Kansas, May 2, 3 and 4, 1933.

primary in dogs and rodents, it is usually contracted by man from dogs. The various quarantine and muzzling ordinances and the picking up of stray dogs is an important measure.

When once a person is bitten the dog should not be shot, but should be penned, fed well and observed closely for ten days or two weeks. Any animal that has the disease will die in a few days; therefore, its living for a time will prove that it is not rabid. This method is far superior to securing the head of the suspected animal and looking for Negri bodies. It is very easy for the inclusion bodies of distemper to be confused with Negri bodies as they are very similar.

When the dog has been killed its head should be packed in ice, placed in a tight container and sent to the laboratory immediately as autolysis and decay soon make it valueless. In this state the specimen can be sent to the Kansas State College, Manhattan; the University of Kansas School of Medicine, Kansas City, Kansas, or to private laboratories. As the average incubation period is about 40 days, there is sufficient time to watch the dog for 10 days, send its head in for examination and still have time to finish the antirabic treatment before the onset of the disease.

In case a person is bitten by a suspicious dog or one which cannot be found, the antirabic treatment should be given. All bites should be treated well with concentrated nitric acid as this has been found to be superior to other reagents in preventing the disease; the other reagent of value is crystals of phenol. Iodine, mercurochrome, silver nitrate and all other such reagents are of very little value.

While this is not a common disease, it is widespread and causes a goodly number of deaths. In nearly all instances it is a disease that can be prevented by proper treatment, even after exposure.

Pasteur produced a fixed virus by successively passing the virus through rabbits until a maximum virulence to rabbits was obtained as manifest by it killing in a time, usually six or seven days, which could not be decreased by more passage.

This he called "virus fixe." This fixed virus was injected subdurally into rabbits and when they died the cord was removed aseptically. It was then placed in a jar over sodium hydroxide and allowed to dry. The cord was then cut in about one-half centimeter lengths and ground in 2.5 cc. sterile salt. The cord of the first injection was dried 21 days, the second was of a cord dried 20 days and the last, as Pasteur used it, is of cord of an animal dead the same day as injected. This last injection will produce the disease if not superseded by those which were attenuated.

The Pasteur treatment has been variously modified. At the New York Department of Health one cubic centimeter of the cord is emulsified in three cc. of sterile saline, the dose usually being 2.5 cc. Marx uses one centimeter of the cord in five cc. sterile bouillon or salt solution, using from one to three cc. of this for injection according to the age of the cord.

Most laboratories today start by giving an emulsion of the cord which is only five or six days old instead of the twenty-one day old cord and give none which has been dried but one day.

Another method for producing immunity is the dilution method of Hogyes. A small amount of the spinal cord of a rabbit dead of fixed virus is emulsified and dilutions of this are made. He gives from 70 to 400 M.L.D. for a rabbit. The results of this method are satisfactory but it has not found extensive use.

Babes has prepared a method whereby heat is used for attenuating; Frantyer has attenuated by using bile, and Tizzoni and Cattani have used gastric juice to attenuate. Ferran has used fresh material in increasing doses. Cumming has used dialysis. Harris dried the fresh virus at a low temperature which is used in a dilute suspension. Other methods such as glycerine and mechanical disintegration have been used. Some have prepared protective serums but they are weak.

James M. Phillips of the Pasteur Institute of Columbus, Ohio, has a method which will preserve the virus for a long

period of time and which may then be used in proper dosage to produce immunity. D'Aunoy has a method similar to Phillips. Harris and Shackell have a method whereby the virus may be kept for a long period of time by drying; it is then used when the ratio of the living to the non-infective virus is estimated at 1:25 and is at least six months old when given. He increases the dose until he gives a person 100 minimum lethal doses for a rabbit. Alvisatos has a method of preparing a vaccine whereby he employs ether for attenuating and removing the fats and lipoids.

A method for treatment that is fast becoming popular is the Semple method for it is simple, effective and is comparatively free from paralytic complications. In this method the brain, medulla and cord of rabbits are removed aseptically and ground in eight per cent saline with one per cent phenol, strained through fine muslin and incubated at 37° C. for 24 hours. At the end of this period it will not cause the disease in susceptible animals and the virus is probably dead. The material is then diluted with an equal volume of saline giving a final dilution of four per cent brain substance with 0.5 per cent phenol; the dose is 2.5 cc. It retains its immunizing powers for at least three months. The dosage is more accurate than in the attenuated cord method since the cord varies greatly in size. The vaccine is easily prepared; each dose is the same and according to Nitch the brain substance is 10 times more virulent than spinal cord and thus by using brain substance we are using a larger proportion of the specific antibody producing substance. The results of this method are equally satisfactory and it seems that it is a safer procedure as the virus has been killed. It is believed that when all the infectivity of the virus has been rapidly destroyed it still has the power of conferring immunity.

In the preparation of the material used in this experiment the Semple method was followed only that a material containing more brain substance was used as it was to be filtered.

The material used in this experiment does not have the brain substance with

its tendency to produce post-treatment paralysis, and it will not contain living virus which may in some cases produce an infection. When the living or attenuated organisms are given there is no way of ascertaining whether the disease which sometimes follows, is the result of the bite or the organisms administered, for it is seldom if ever given to a person who has not been bitten. As the treatment is today it is generally agreed that it should not be given unless the need is quite certain.

In the past few years tetanus antitoxin and serums have been concentrated and toxoid has been prepared so as to lessen foreign protein reactions. Would it not be an advantage to use an antirabic vaccine which contains less foreign material?

The object of this experiment is to produce a method of treating rabies by the removal of most of the brain substance from the material, so that post-treatment paralysis will not occur. It is necessary therefore to show the brain substance causes this paralysis. It has been shown by one investigator as reported in the *Indiana Journal of Medical Research*, that paralysis may follow injections of nerve substance derived from a normal animal. Post-treatment paralysis comes on during or shortly after the treatment and in much less time than rabies develops.

Although the per cent of paralysis caused by the treatment is small, may it not be possible that the treatment is responsible for some deaths which are attributed to the person dying of the disease when it was the treatment which was responsible? It is difficult to differentiate the paralysis caused by the treatment from the true paralytic rabies. Rosenau says: "In mild form it doubtless occurs more often than is indicated by the records." McCoy gives the ratio of paralysis to cases treated as one to over 2,000. He reports eight cases with four deaths, two recoveries and two partial recoveries when using the Semple and Harris methods.

In an article by Koritschoner and Schwemberg, it is shown that the method

for treatment which contains the least brain substance is the most free from complications and that the brain substance is probably the harmful material which causes the paralysis. They used animal experimentation. They say they believe they can draw the following conclusion from their investigations—"the injection of normal spinal cord in rabbits produces a regular emaciation in rabbits—causing a marked reduction in weight. The rabbits had a weakening paralysis of their legs. The larger part died, only a small group survived. It seems that these conditions are brought about possibly by unknown toxins but it is cyto-corin or cerebral lysin which probably works in a fermentive way on the nerve tissue. At first there is a lysis of the nerve tissue—then there is a degeneration, and it is this degeneration which probably causes the paralysis." They agree with Hofrat and Pallauf and they have found it expedient for ordinary treatment in the Vienna Institute to inject as little brain substance as necessary.

Koritschoner and Schwemberg continue: "From these conceptions we come to the absolute conclusion that the paralysis did not come from the bite but from the treatment. These conditions are too frequent and too identical to be from any other cause." In concluding they say: "In 1915, and the same condition probably held from 1898 to 1921 when the Pasteur method was discontinued, in this Institute out of 39 cases of paralysis, investigations and clinical descriptions were made of six of the eight deaths. Conclusions were drawn that they were similar to the conditions found in the rabbits," and that "it is due to the brain substance."

As Alvisato's method produces very little paralysis, it would indicate it is the fats and lipoids which cause the paralysis. Koch says there is no known case of myelitis from a bite where the treatment has not been given.

Rochaix and Durand using Abderhalden's method found that the serum of the human brain was as destructive as that of rabbit brain. They conclude that

the injection of rabbit brain substance has a bad effect on the nervous system. They believe the cause of myelitis is not due to the infection of rabies. Myelitis has developed in cases where they had never been bitten or where it was later shown that the dog did not have rabies.

Kraus, in a discussion presented at a meeting of the Pathological Anatomists at Vienna, is in thorough agreement—that the nerve substance is the cause of paralysis.

If then it is the brain substance which produces the post-treatment paralysis it was thought this substance might be removed by filtration, as the filtrable virus should go through the filter and produce immunity, and it has been proven enough goes through to cause the disease. The following experiment was performed:

"Virus fixe" was secured from the Jensen-Salisbury Laboratories, and injected intercerebrally into rabbits. This virus has been previously passed through a large series of rabbits and was a 20 per cent brain suspension in normal saline when obtained. After waiting for the death of the animals the brains and cords were removed aseptically and triturated in a mortar. Enough sterile normal saline was added to make the solution a 20 per cent brain suspension and 1 per cent phenol. This was then shaken in a sterile beaker with glass beads for one hour; tested for sterility in broth tubes both aerobically and anaerobically. It was then incubated at 37.5° C. for 24 hours and an equal amount of saline added to make a 10 per cent brain suspension with .5 per cent phenol.

This material was again tested for sterility in broth and by injecting 0.2 cc. subdurally in two rabbits and two cc. in two rabbits subcutaneously. If these rabbits lived for 14 days it was considered safe for use.

Some of this material was centrifuged and the supernatant liquid filtered through a Buchner filter with two thicknesses of fine filter paper by use of a vacuum pump. Some was then passed through an N size Berkefeld filter also by using a vacuum pump and with considerable difficulty.

Method of Producing Immunity: Two cc. were injected subcutaneously back of the shoulder of rabbits on successive days so that two rabbits received four cc.; two received six cc., and three received eight cc. of each of the 10 per cent non-filtered suspension, the Buchner filtrate, and of the Berkfeld filtrate. Fifteen rabbits were given one cc. injections of the Buchner filtrate for 14 successive days and 15 were given one cc. injections of 10 per cent suspension for 14 successive days. Five rabbits were given three grams each of the brain substance removed by filtration. Three were given the living virus only.

Testing of Immunity: After waiting 21 days for immunity to develop these rabbits were each injected in two places with 0.25 cc. of a 20 per cent suspension of brain substance containing living virus from an animal dead of rabies in order to get a comparison of the immunizing effects of the kinds of material used for the purpose of producing immunity and to determine if immunity had been produced.

RESULTS

In the Berkfeld group when but four to eight injections were given, two rabbits died and five lived.

In the Buchner filtrate group when but two to four injections were given, two died and five lived.

In the group which received the vaccine which contained 10 per cent brain substance, four died and but three lived.

In the group given 14 daily injections of the Buchner filtrate, 12 lived and but three died.

In the group given 14 daily injections of the 10 per cent brain substance, 11 died and but four lived. Four died as a result of the treatment as the living virus had not yet been given.

In the group given one gram of the brain substance on three successive days, which had been removed by filtration and diluted to inject, all five died. In the control group of three given living virus only, two died and but one lived.

CONCLUSIONS

It is the brain substance contained in antirabic vaccine which, at least, causes some of the post-treatment paralysis.

Removing the brain and spinal cord substance from antirabic vaccine does not materially enhance its protective powers.

An antirabic vaccine from which the brain and cord substance is removed would be a safer method of treatment.

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R

Contamination of Fruits and Vegetables with Toxic Insecticide Spray Material.—The Committee on Foods reports that distributors of fruits and vegetables that may bear toxic spray material are obligated to remove such poisonous contaminations before they enter commerce for retailing to the public, or to warn food manufacturers of the possible presence of the spray residue. Food manufacturers using fruits and vegetables should take proper precautions either to assure the absence of toxic spray contaminations or their removal before the products are prepared or packed for consumption. Distributors of fresh fruits and vegetables and manufacturers of foods containing these products bear a serious responsibility to the public that their products as presented for consumption are entirely wholesome; carelessness or disregard of this public health responsibility is criminal. (Jour. A.M.A., October 21, 1933, p. 1316).

RESULTS OF TREATMENT OF INTERMITTENT CLAUDICATION AND THROMBO-ANGIITIS OBLITERANS WITH PARA-THOR-MONE*

Report of Four Cases. Preliminary Report

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Intermittent claudication and thrombo-angiitis obliterans have presented very difficult problems to us in spite of the many forms of treatment available. Our past experience has been that too often the course has been prolonged, the outcome uncertain and too frequently unsatisfactory.

Recently the laboratory has reported a subnormal blood serum calcium content in patients with these conditions and, considering that this might have some bearing on the situation, it was decided to employ Collip's parathyroid extract. By following such a course it was presumed a hypoparathyroidism was in the background. Although this was a digression from the many well-known theories, etiologic factors and treatments it was felt to be temporarily justified in view of past experiences. It is realized that the post-treatment period of observation, on the two patients with intermittent claudication and the two cases of thrombo-angiitis obliterans treated in this manner, has been too limited to warrant dogmatic conclusions. However, the results so far have been so unexpectedly rapid and uniformly satisfactory, that it seems a preliminary report is not too presumptuous.

Case I.—A male aged 40 was admitted to the Halstead Hospital August 12, 1930, because of pain and paresthesia in the feet on exertion. He had always been nervous, excitable, readily depressed and apprehensive, and used tobacco sparingly. In 1922 he began to have episodes of pain, numbness and tingling in either or both feet on walking; no color changes were reported. These episodes increased gradually in number, duration and severity. During July, 1930, following a few months of business reverses the episodes became severe enough to make his work as a merchant almost impossible.

On examination he was very nervous, restless and anxious though maintaining a cheerful demeanor. At rest, the findings appeared to be otherwise normal. The pulse was 84 and the blood pressure 120 systolic and 80 diastolic. A short walk in the hospital corridors usually precipitated leg and foot pain, numbness and tingling with apparent decrease in the dorsalis pedis and posterior tibial pulse of the involved lower extremity, associated with slight but definite pallor and coldness of the foot on elevation, definite erythema on lowering, all relieved by rest and not reappearing if inactive. The blood count and Wassermann reaction were normal and the urine findings negative. The basal metabolism rate was minus 23. He followed treatment with postural exercise, periods of rest, sodium bromide, fluid extract of Hyoscyamus, luminal, sodium luminal, and thyroid extract until November, 1932. Relief was obtained only by rest. He was unable to return to work. He was readmitted to the hospital November 18, 1932, when the findings were similar except that the blood calcium was found to be 7.6 mg. per 100 cc. plasma. He was given 0.5 cc. or 10 units of para-thormone subcutaneously every other day for 10 injections and calcium gluconate, one teaspoonful by mouth, after meals, for 20 days. The blood serum calcium increased to 13 mg. and the spells of pain diminished to the point of slight tingling on considerable exertion. Since treatment he has been able to follow his occupation without interruption, and denies the need of further care.

Case II.—An Englishman aged 49 entered the Halstead Hospital on January 27, 1933, and gave the following story. On January 7, 1933, the left foot began to get cold and painful and a few days after the onset blanched when raised and became very red when lowered. The pain rapidly became extremely severe, requiring morphine. The foot would hardly bear his weight because of tenderness. The pain interfered with his appetite and markedly with his sleep. He used cigarettes excessively.

On examination he apparently was quite nervous but would exhibit anger

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when the nervous manifestations were remarked. The pulse ranged from 80 to 120. The blood pressure on admission was 176 systolic and 118 diastolic, rapidly falling to 130 systolic and 86 diastolic. The left foot and lower third of the left leg were cold, dry and very pale with the foot elevated, except for a deep reddish purple constant discoloration over the ball of the left foot and ecchymoses almost covering the left first and fifth toes. When lowered the involved foot and adjacent leg became intensely red and purple. The foot was very tender. The left toes and adjacent foot were partially anesthetic. Vascular exercise, rest and iodides in large doses had accomplished nothing. Morphine and massive doses of sedatives were needed. The laboratory findings were: hemoglobin 80 per cent (Sahli), erythrocytes 4,160,000, leucocytes 7,100, differential count and smear normal; urine negative; blood sugar 110 mg., creatinine 1.4 mg., nonprotein nitrogen 38.2 mg., serum calcium 7.2 mg. Roentgenograms of the left foot were reported negative. Para-thor-mone and calcium gluconate were given as in the preceding case. After the second injection the morphine was unnecessary because the pain was gone. The tenderness gradually subsided. After the seventh injection, or on the fourteenth day of the treatment, the left foot became warm and on elevation it was a soft reddish color. The color was ruddy but not cyanosed when lowered. The blood plasma calcium rose to 13.5 mg. The pulse ranged between 70 and 80.

On March 18, 1933, a feeble pulse could be felt in the left dorsalis pedis but none in the post tibial artery. The foot remained warm, moist and a diffuse pink. The deep discolorations and the ecchymoses had disappeared. The blood serum calcium was 11.5 mg. Since then he has returned to regular work and sees no need for further care and will not report for re-examination.

Case III.—A Scotch male of 64 entered the hospital on June 2, 1933, complaining of a cold, painful right foot. About April first he noted severe pain just back of the right great toe nail where a small pink spot appeared. The

pain, coldness and discoloration spread over the toes and anterior half of the foot. The pain was sharp and piercing, requiring morphine for relief. On May 11, 1933, a doctor removed the great toe nail in an effort to relieve the pain. The right foot and toes became tender, numb, tingling, burning, pale when elevated, and very red and blue when lowered. A constant discoloration appeared on and around the great toe. The pain made sleep difficult without morphine. Vascular exercise, rest and sedatives were not giving relief. There was some swelling of the right foot. His habits were exemplary.

His physical findings showed the right foot to be cold and pale when elevated, red and cyanosed on lowering. The right great toe nail was gone and the toe and adjacent foot showed constant reddish purple discoloration. The foot was markedly tender and slightly edematous although the skin was dry. The motion of the toes was limited. The great toe and adjacent foot were partially anesthetic. No pulse could be felt in the right dorsalis pedis and posterior tibial arteries. In other respects he was well preserved and in good condition showing little arterial changes for his years. The pulse was 84 and the blood pressure 130 systolic and 80 diastolic. The blood count, urine findings and blood Wassermann were normal and the roentgenograms of the foot were negative. Blood plasma calcium was 7.5 mg.

It was believed that local senile arterial changes probably entered into the condition alone or in conjunction with a Buerger's disease and that nothing short of amputation would give relief. He elected to try para-thor-mone which was given as in the two previous cases and after the third injection the pain was relieved to the point where morphine was unnecessary. The pain disappeared quite rapidly and has remained absent. The tenderness and discoloration gradually disappeared, the foot became warm, moist and ruddy, even when elevated about the twentieth day. The blood serum calcium reached 13 mg. He has returned home, gradually increased his activity, and is now able to be about enough to

supervise the farm work. He feels able to use the foot for regular work. On July 11, 1933, a feeble pulse could be felt in the right posterior tibial and dorsalis pedis arteries.

Case IV.—A German male of 46 came to the Halstead Hospital outpatient clinic in July, 1932, complaining of pain, soreness, mottling and disuse of the left hand and forearm, left foot and leg, right foot and leg, in the order named, in spells and after exercise. These spells had been coming on for about 20 years. At first they were relatively mild, gradually increasing until June, 1932, they would follow such slight exertion that he was almost totally incapacitated. He could not walk more than a block without pain in one or both legs and the acts of dressing or feeding himself might precipitate an attack in the left upper extremity. During these attacks it was observed that the pulse to the part would almost disappear and the hand or foot would become cold and pale or red and cyanosed according to the position. The episodes would last from a few minutes to several hours. He elected to follow treatment at home. Vascular exercise, regular life, rest, graded activity, iodides, sedatives and thyroid extract were tried without the slightest improvement. He lived in constant fear of the attacks and became badly depressed. His sleep was poor. He used tobacco moderately.

On admission to the hospital June 26, 1933, he was depressed, emotional, apprehensive and restless. The pulse was 84, blood pressure 120 systolic and 80 diastolic and the remainder of the findings at rest were normal. The drawing of blood from a vein in the right antecubital fossa precipitated an attack of intermittent claudication in that hand and forearm. Attacks likewise continued to appear in the other extremities on trivial exertion. The blood count and urine findings were normal and the blood Wassermann negative. Fluoroscopy of chest was reported negative, blood creatinine 1.3 mg., non-protein nitrogen 35.8 mg. and plasma calcium 8.2 mg. The basal metabolic rate was plus 17. The injections of para-thormone given as in the other cases were started on June 28, 1933. The patient

would not increase his activity until July 6, 1933, when after much urging he angrily went out to produce attacks but returned stating that a five-mile walk caused no trouble. Since then he has voluntarily continued to be quite active without the slightest evidence of return of the intermittent claudication. The blood plasma calcium rose to 13.5 mg.

SUMMARY

Two patients with intermittent claudication and two with thrombo-angiitis obliterans have recently been treated with Collip's parathyroid extract. The indications for its trial were: (1) unsatisfactory results with other forms of treatment in similar cases in the past; (2) these four cases had not improved on other forms of treatment previously employed, and (3) the presence of a hypocalcemia suggested a metabolic disturbance with possible vaso-constrictor hyper-irritability. We considered that the condition of at least three of these patients was decidedly bad and two of them appeared to be facing certain amputation. To each the para-thormone was given 0.5 cc. or 10 units subcutaneously every other day for 10 injections. The improvement in each case was relatively rapid and uniform. The attacks of intermittent claudication were controlled, permitting at least temporary return to normal activity. The circulatory changes in the patients with thrombo-angiitis obliterans were even more spectacular, *i.e.*, fairly prompt and complete control of pain that had necessitated morphine, return of warmth, moisture, diffuse reddish color on elevation of the foot, loss of tenderness, improved sensation and motion of the toes, disappearance of the ecchymoses and deeper discoloration, and return of pulse in dorsalis pedis and posterior tibial arteries. It seems that at least remissions were brought about. There were no untoward reactions to the extract. Calcium gluconate was given by mouth to two patients and not given to the other two but their responses appeared to be equal. The blood plasma calcium has dropped slowly in Case II. Late determinations have not been made on the others either because of lack of opportunity or time. We feel that it will

be worth while to continue the trial of para-thor-mone in intermittent claudication and Buerger's disease in selected and controlled cases even if it does no more than relieve pain and bring about remissions.

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CASE REPORT

Report of Three Cases of Tularemia Treated by Convalescent Serum

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These case reports are not intended to be conclusive by any means, but are reports on cases which yielded readily to treatment by convalescent serum and are reported only with the idea of a preliminary, on account of the small doses of convalescent serum required to stimulate rapid improvement.

Case 1. Grace M. Aged 44. Married at age of 23. Went hunting November 27, 1932, and handled quail and squirrels. Two days later she was awakened by severe pain in the left arm. She had a small abrasion on the left thumb when hunting. This became very sore. The inflammation extended up into the lymphatics, which were enlarged in the midarm, above the elbow and under the axilla. Her temperature went to 104, then down to 101 and stayed down for a week. She was treated in the usual manner, but the sore did not heal and a week later she became extremely ill with a generalized eruption, the temperature running 104 and 105, and her general condition extremely bad. Agglutination test for tularemia was positive 1 to 640. On account of her severe general condition one of our tularemia patients gave us some blood which was defibrinated and the serum administered to her in doses of 1½ cc. intramuscularly. Her general condition improved immediately and the generalized maculopapillary eruption began to recede in a few hours. The first dose was given December 20. The temperature reached normal on December 23 and daily inoculations of 1½ cc. of unheated convalescent serum were con-

tinued until December 26, when the patient was discharged as cured. The inflammation had all disappeared from the primary wound.

Case 2. Bobby A. Aged 12. Came to the Clinic April 26, 1933. Acutely ill with fever, nausea, vomiting and diarrhea. Examination was negative except for indefinite tenderness in upper abdomen. Three days later he was brought in because of swelling in right axilla. The glands were very tender. No skin lesion was found at this time. However, on May 2 a small pustule was seen on forefinger of right hand. Wet dressings were applied. Two days later an ulcer, one-eighth inch in diameter, with moderate ulceration was diagnosed as tularemia and patient gave a history of skinning a rabbit on April 16, ten days before onset of symptoms. Wet dressings were continued. Temperature varied from 99 to 100.5 degrees. Glands became less tender and smaller. Lesion began to heal. Healing was complete on May 21. Patient was dismissed as cured May 27, although glands were still palpable. On June 1 patient returned with a temperature of 103.8; pulse 120. Face was flushed. Axillary glands were smaller and less tender than four days previous. Examination was negative except for deep tenderness over the liver. The following day the spleen was found to be enlarged. Fever still present. Agglutination positive 1 to 5120. Treatment: 1½ cc. unheated convalescent serum intramuscularly every other day until ten treatments had been given. Discharged June 11 and has been symptom free since.

Case 3. Anna S. Aged 63. Came to the Clinic May 8, 1933, with a history of onset 1½ years ago. The finger presented looked like a run around on middle finger of right hand. Infection extended into glands in the elbow and underneath arm. There had been a loss in weight of approximately 60 pounds. She had sores on the other hand and on the right foot had a very painful toe. She believed the toe was broken. However, x-ray examination showed no evidence of a broken toe and there was no history of an injury. Her temperature was 100.2; pulse 90. Agglutination test for tula-

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remia was positive 1 to 1280. Unheated convalescent serum was given after considerable difficulty in securing a donor and the wound began to heal. The pain in the back and through the arms disappeared and patient had an uninterrupted recovery. Treatment: Ten treatments of $1\frac{1}{2}$ cc. each of unheated convalescent serum, intramuscularly, every other day.

As stated previously these cases on account of the small number are not given with an idea of anything specific, but in these particular cases the results were what we would call 100 per cent by use of small doses of convalescent serum.

—R—

UNIVERSITY OF KANSAS MEDICAL SCHOOL CLINIC

Hernial Appendicitis—Report of Case

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"Hernial appendicitis" refers to those cases in which an inflamed appendix is found within a hernial sac. It should not include these cases in which the changes in the appendix are secondary to strangulation of the hernial contents. The recognition of the appendix within a hernia is no longer a rare event, but the pre-operative diagnosis of acute appendicitis in such circumstances is often difficult. The case to be reported is of interest because of the clinical picture and the sequelae.

C. V., a colored male, 50 years of age, was admitted to the hospital with the following complaints: Dysuria, pain in the scrotum, pain in the right groin, backache and fever. One week prior to admission the patient was conscious of an old right inguinal hernia descending into the scrotum. This occurred during a seizure of sneezing and coughing which had accompanied a "head cold." Attempted reduction of the hernia by the patient failed. The swelling of the scrotum increased and was associated with tenderness. Dysuria was noted also at the onset of the present illness. There

was neither nausea nor vomiting. The past history included an inability to void because of a urethral stricture one year prior to admission. This condition had been relieved by dilatation and irrigations. There had been a previous history of gonorrhea of 25 years duration.

Physical examination, on admission, was essentially negative except for a tender mass in the right lower abdominal quadrant which extended into the scrotum. The scrotum was enlarged, tender, and presented an area of fluctuation. The temperature was 102° , and the pulse rate was 120. The urine contained one plus albumin with two to four pus cells per high power field. There was a leucocytosis of 25,500 with 75 per cent polymorphonuclears. The hemoglobin was 77 per cent. The blood chemistry and serology were negative.

Three days later, a right scrotal abscess, lying superior to the testicle, was incised and drained. Cultures from this abscess produced hemolytic streptococci. A right hydrocele of the tunical vaginalis testis was also identified. There was extensive enlargement and induration of the tissues around the right spermatic cord with extension of the process through the right internal ring. No effort was made to identify the hernial sac because of the fear of extending the infection. Institution of drainage of the abscess was followed by a return of the temperature to normal and a general improvement of the patient's condition. However, the swelling and induration of the tissues over the spermatic cord and the large hydrocele were associated with complaints of pain in the groin and in the back. In order to decrease the period of disability, a right orchidectomy was performed one month later. In the indurated tissues about the right spermatic cord, a tubular structure was encountered. It was larger than the usual vas deferens and was situated anterior to the usual position of the vas. This structure was clamped, ligated and severed. The whole cord was transfixed and ligated. The right testicle and the indurated tissues about the cord were removed below the level of the internal ring. There were no postoperative com-

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plications and the patient was dismissed on the tenth postoperative day.

The pathological report was as follows: The specimen consists of a pear shaped structure measuring 10x5.5x5 centimeters. One end of the specimen is bulbous and includes the testicle. This organ is moderately compressed by an organizing, hemorrhagic exudate within the vaginal sac. Approximately three centimeters of a thickened, indurated, spermatic cord can be identified in its usual position. Section reveals the vas deferens surrounded by the lumina of many small vessels. Anterior to the cord is a pyramidal shaped mass of firm fibrous tissue in which are small hemorrhages. This mass extends to the upper level of the testicle. There is no communication between this structure and the vaginal sac. Embedded within the pyramidal shaped mass is an appendix 7.5 centimeters in length and five millimeters in diameter. The distal three centimeters of the organ are inseparable from the surrounding fibrous tissue. The gross and histological diagnoses were: Infected hydrocele of the right tunical vaginalis testis with secondary hemorrhage; subacute interstitial epididymitis; acute and chronic cellulitis of the spermatic cord; chronic appendicitis and adhesive appendicitis encysted within an infected inguinal hernial sac. The impression was that these changes were the sequelae of a ruptured appendix within the sac of a right inguinal hernia.

DISCUSSION

Taylor¹ presents a brief synopsis of the earlier literature, including the first case reported by Claudious Amyard, Esq., in 1735. While performing an operation on a boy of 11 years, Amyard traced a sinus in the thigh to an incarcerated scrotal hernia containing an appendix perforated by a pin.

Since the report of Amyard, many cases have appeared in the literature in which the appendix has been found within a hernial sac. In many of these cases the appendix represents only a portion of the hernial content, although the majority of such reports include either the appendix or the appendix and the cae-

cum. The appendix has been identified as a part of the content of femoral or inguinal hernias. Of the latter, it has been found in the direct or indirect types and either in right or left inguinal herniae.

It has been identified in herniae of all types in from one per cent to 2.2 per cent of the cases, according to De Garms³, Wood⁴ and Coley.⁵ According to Wood,⁴ no figures are available to show the proportion of herniae in which the appendix is found alone in the hernial sac. Rivet⁶ reported 63 per cent inguinal and 30 per cent femoral in 94 cases of appendicular herniae. Taylor reports 11 cases of "grossly diseased" appendices in 96 cases of right inguinal hernia in which the appendix was removed routinely. Edelen⁷ has recently reported a case of ruptured appendix within a right scrotal hernia.

The literature indicates that the condition may be present at any period from infancy to old age. Undoubtedly, most of the cases have occurred in the male. Auster² believes that the majority of cases of hernial appendicitis have appeared in the age group from 55 to 70 years and that the condition is most often associated with right indirect inguinal herniae.

ETIOLOGY

Two factors are involved in the etiology of this condition. First, those concerned in the production of an appendicular hernia, and secondly, those related to the development of appendicitis.

Congenital weakness in the structure of the peritoneal leaves enclosing the caecum is an important predisposing factor in the development of the hernia. This, according to Wood,⁴ must often be associated with a low position and a definite degree of mobility of the caecum and appendix. Robinson⁸ has found, that in one-third of 435 autopsies, the caecum and appendix were in a "potential position" to enter the dependent peritoneum of inguinal herniae. The exciting factor in many cases is a sliding hernia.

The predisposing factors in the etiology of the appendicitis only differs

from that of the intra-abdominal lesion in that the hernial appendix is more exposed to external trauma. Foreign bodies, adhesions and stenosis have been found. Interference with motion, peristalsis, circulation and expulsion of foreign material, resulting from such changes, do not differ from changes associated with appendicitis in other locations. The exciting factor is often bacterial.

Various types of pathological changes have been described in the appendix. In many cases, the appendix shows evidence of chronic inflammation and is rather firmly adherent to the posterior wall of the hernial sac. Other cases show acute inflammation, gangrene or perforation. Taylor,¹ in writing of the correlation of diseased or abnormal conditions of the appendix with hernia, states that the greater number of these have been concerned with the finding of acute appendicular pathology as a complication of the hernia.

DIAGNOSIS

The diagnosis of hernial appendicitis is usually difficult pre-operatively. The history, when available, of a right inguinal hernia with descent into the scrotum and followed by scrotal swelling should suggest strangulation or appendiceal hernia with appendicitis. According to Auster,² in hernial appendicitis, the pain, while present, is dull and constant, especially in straining, becomes paroxysmal and after rupture, has a tendency to remission. In hernial strangulation, the pain is continuous and increasing. Palpation may reveal the same findings as in strangulation, although the palpation of the appendix or the fluctuation of an abscess cavity may aid in the differential diagnosis. He believes that fever and vomiting are inconstant, as are also the blood findings, especially in children and in older people. He maintains that a severe toxemia is usually present in all cases.

The case here reported includes a definite previous history of descent of a right inguinal hernia into the scrotum followed by scrotal and inguinal swelling and a localized area of scrotal fluctua-

tion. There was associated fever, leucocytosis, and remission of pain. There was neither nausea nor vomiting. These findings certainly favor the diagnosis of appendiceal hernia with rupture. The identification of the scrotal abscess with no other factors indicating a more probable source for the infection also substantiate the diagnosis.

THERAPY

Therapy, in cases of this type, is surgical. An acutely inflamed appendix should receive primary consideration. Herniorrhaphy is of secondary importance and particularly in cases of frank suppuration, should be deferred, not only to avoid spreading the infection, but also because the inflammation would defeat the radical cure of the hernia. Packings have been used to produce extensive fibrosis and partial closure of the hernia. Taylor¹ and others have advocated the routine removal of all appendices through the usual herniotomy incision. Many believe that the incidence of hernial appendicitis will be reduced in the future because of earlier surgical intervention in the treatment of herniae.

CONCLUSION

A case of "hernial appendicitis," occurring in a 50 year old colored male is herein reported. The hernia was of the right, indirect, inguinal type. The appendicitis was represented by a chronic appendiceal and peri-appendiceal lesion, probably following an acute perforating appendicitis and peri-appendiceal abscess.

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LETTERS FROM A KANSAS DOCTOR TO HIS SON

JOHN A. DILLON, M.D.

Larned, Kansas

My dear Boy:

Once more you are back at your work with a nine months glorious grind ahead of you. You have been often told that your school and college days were the best times of your life. This propaganda has been put out since time immemorial in order to instill joy into the lives of students and to foster a proper appreciation of the advantages of an education. You may have some doubt concerning the truth of this when some hard-boiled individual with a hang-over cephalalgia is giving you a long oral quiz on "The Psychic Reactions of Head Lice on Bald Headed Men." As a young boy while sitting on a hard bench dangling my bare feet six inches from the floor and with flies working on my scratched bare legs, I could not subscribe to the belief that this was the happiest time of my life, and even found it almost impossible to love my teacher as the copy book directed. A few years later at the age of 10 my complex reversed itself and it became my custom to fall desperately in love with the teacher. The fact that she was 35 or 40 years old and married did not dim my ardor in the least, as attested by the apples duly moistened by saliva and laboriously polished by a dirty handkerchief which I placed on her desk. But these blissful years were transient and when 14 and pimples arrived my perspective changed entirely and my fellow student co-eds became the center of affection. Curls were always my undoing and almost any girl whose mother had fashioned ringlets for her could bowl me over at sight. Her dress did not need to be nice nor her neck and ears overly clean. I could overlook these shortcomings if she had curls, and my cup of joy was filled when the teacher would punish me by making me sit with one of these adorable creatures. As I recall this curl obsession lasted up to the mustache age. These youthful passions and frailties I

have kept locked up in memory for many years and am only revealing them now in order to demonstrate the complex of your immediate ancestor. It possibly will also clarify the situation in explaining some of the peculiarities of your own juvenile trends. Although as I remember more recent styles, curls have long since taken a back seat for legs and bare backs. In my callow days the sight of an exposed knee was a devilish incident to the boys and a source of great embarrassment to the girl involved.

So much for childhood memories. In your work this year you will meet with several types of instructors as you have in the past. The first one that will impress you is the terrifier. The fellow who puts the fear in all the boys and systematically carries out an attitude calculated to discourage any initiative on the part of the student. This fellow usually teaches some unimportant subject relative to medicine, is possessed of an inferiority complex and as a compensatory refuge takes it out on the boys. I have never yet seen a high class man in the profession who enjoyed making the study of medicine hard for the student, or who was not always willing to go out of his way to help some poor devil who was having hard sledding. The English have a very commendable way of encouraging free expression from their students and the most far-fetched opinion or bizarre diagnosis by a junior is treated with grave consideration. To laugh at the halting theory put forth by the undergraduate is the height of discourtesy and the horse laugh is strictly an American innovation. They seem to grasp the idea that it is just as necessary to build up a student's self-esteem and self-reliance as to teach him the capillary anastomoses in the tail of a horned toad.

In this country it has been quite the thing to discourage any manifestation of individuality and the average young doctor, unless he has been over-endowed with intestines, leaves college afraid to express an opinion or afraid to do anything except ask questions.

Another type often found on the fac-

TUBERCULOSIS ABSTRACTS

Furnished through the courtesy of
The Kansas Tuberculosis and Health Association

The need for assorting cases of pulmonary tuberculosis into definite groups led, some years ago, to the formulation of a scheme of classification. It is based primarily on the extent of the lesion and is now widely used by sanatoria and clinicians. In recent years, interest has been centered on the character of the fundamental tissue reaction in the lungs. Accordingly, Dr. George G. Ornstein and his coworkers have attempted to classify the disease on a qualitative basis of tissue reaction resulting from infection by the tubercle bacillus. They describe three main types of acute tuberculosis. Abstracts of the paper by Drs. Ornstein and Ulmar follow.

Acute Forms of Pulmonary Tuberculosis

The authors disagree with the conception that tuberculosis usually begins as a minimal lesion and slowly progresses to the far advanced stage. They point out that inflammatory forms can occur with an acuteness not usually attributed to tuberculous infection, a small or large part of one or both lungs being involved within a few hours.

THE EXUDATIVE TYPE

This is characterized by an intense inflammatory reaction produced by a small dose of tubercle bacilli in highly sensitized tissue. The response is chiefly serous, there is little if any destruction of tissue and the process clears by resolution.

Clinically it is frequently confused with the acute cold, grippal infections and broncho pneumonia. The patient is taken acutely ill with fever, cough and expectoration. Fortunately, hemoptysis (40 per cent of cases) or history of contact frequently indicate tuberculosis. Physical signs are scanty. However, x-ray is startling because of the extent of the lesion. Complete resolution rapidly occurs, frequently leaving no trace of the original infection.

Therapeutic indications are, (1) no in-

ulty is the textbook exhorter; the fellow who worships at the shrine of some good author and painstakingly diffuses this knowledge chapter by chapter of hackneyed literature on his special subject. His hour is usually devoted to sleep and relaxation by the class who know pretty well what page he is on when they go to sleep. This individual is easy to get along with and is usually classed by the boys as a good old sport. You will meet with other types and on the whole will be impressed with your instructors. Probably the kind I have described does not exist on your faculty. They will be found to be very human and likable and devoted to their work. You will be especially impressed with their good fellowship when you refer them a few opulent cases after you graduate. So I would admonish you not to become too scared at the "terrifier" nor too sanguine over the easy going individual. Either one or both may be bluffing. Better play safe and know your stuff. And don't forget it is often a source of amazement to the staff of a medical college when they see the personnel of the individuals who have felt the urge to become disciples of Aesculapius. We might call it a fifty-fifty break.

I note your list of books required and am impressed with the universal price of ten dollars per book. They certainly should be good reading and no doubt you will have trouble in tearing yourself away from them at meal time. However I might mention there seems to be no well organized plan to stop the publication of medical books so it might be well not to stock up too heavily just at present.

Love,

DAD.

—R—
Why Worry?

"Do you keep animal crackers?"

"No, but we have some very nice dog biscuits."—
Boston Transcript.

—R—
Educational Limitations

"How soon shall I know anything after I come out of the anesthetic?"

"Well, that's expecting a lot from an anesthetic."—
Boy's Life.

interference with the normal return to *status quo* by any operative procedure and (2) avoidance of reinfection.

Case 1: A young woman, white, 29 years old, stenographer, presented herself because of an acute cold with cough, which persisted. She had had contact with a tuberculous father, who had died a few years previously, and more recently with a sister, who had recovered from tuberculosis. Her cough was not severe and she expectorated at times. She had lost some weight and complained of marked fatigue. Physical findings were scant: dulness on percussion and bronchovesicular breathing over the right upper lobe posteriorly, and moist rales were also heard from the apex to the fifth rib posteriorly.

x-Ray disclosed a small annular shadow in the right upper lobe. There were some acinous productive changes in the left upper lobe. Examination of the sputum disclosed tubercle bacilli. The patient was sent to the country on a modified rest regimen. Her symptoms quickly disappeared. She gained weight rapidly. Six weeks later no abnormal findings were heard; she had no complaints; she gained 14 pounds. The annular shadow in her first *x-ray* had disappeared.

THE EXUDATIVE-PRODUCTIVE TYPE

This type is undoubtedly due to a different balance between the mass of dosage or virulence of the organism and the allergic tissue reaction of the host. Instead of a purely exudative response there is evidence of tissue destruction, and the process of destruction and subsequent reparation is usually somewhat lengthy.

Clinically this form is characterized by an acute onset with toxemia of moderate severity which persists for a much longer time than in the exudative type. Eventually the symptoms disappear and *x-ray* shows clearing which is not however complete. A linear type of scarring, the result of the peculiar type of lung-damage which occurred at the onset of the disease, always remains. The patient recovers not by any means of operative interference but by being let alone and

protected against any further reinfecting dosage. Surgical interference, in the opinion of the authors, cannot improve upon the results obtained through the normal unaided process of nature.

Case 3: A man, white, 25 years of age became ill, June, 1929, with an acute pneumonic condition. For two weeks the patient ran an elevation of temperature which subsided. He was then *x-rayed* and a diagnosis of tuberculosis was made. Tubercle bacilli were demonstrated in his sputum. He was sent to a sanatorium and was put to bed. His cough and expectoration subsided rapidly.

An *x-ray* was taken June 1, 1929. In the dense exudative shadow there were some high lights which appeared like cavity-formation. An *x-ray*, taken thirty-seven days later, demonstrated beginning resolution. An annular shadow was still present in the 2nd interspace which was still interpreted as a cavity. Four months later the cavity had disappeared, and further resolution throughout was noted.

An *x-ray* was taken on December 16, 1929. By this time the patient had completely lost his cough and expectoration. He had gained weight. The *x-ray* demonstrated further resolution. Because of the irregular absorption of the exudate the *x-ray* gave one the impression of a large annular shadow being present which could easily be interpreted as a large cavity. The patient enjoyed good health throughout this period; there were no physical findings. The *x-ray* of July 12, 1930, showed a breaking-up of the walls of this annular shadow leaving linear strands of fibrosis.

On December 4, 1930, there were some linear strands in the right upper lobe. *x-Ray* of February 14, 1931, showed still further resolution, leaving a few strands of fibrotic tissue.

The *x-ray* of April 12, 1932, showed no evidence of the acute inflammatory tuberculosis which had existed in the right upper lobe. At this time one would be very hesitant to state whether a tuberculous process had existed. This case is an excellent example of the possibility of resolution in acute inflammatory forms of tuberculosis. Any form of surgical

or medical therapy would have produced a good result.

THE CASEOUS-PNEUMONIC TYPE

Here, because of excessive stimulation of hypersensitive tissue by massive dosage, there is an intense inflammatory response resulting early in the disease, in cell death with its resulting coagulation necrosis or caseation. As a result the patient is very ill and toxic with profuse cough and expectoration as liquefaction of the caseated area occurs. As the caseous material is sloughed out, toxic absorption begins to diminish and temperature and pulse gradually approach the normal. With the completion of the sloughing the patient feels relatively well although there is now a definite cavity present in place of the previous area of caseation.

From now on repair proceeds with resultant scar formation. What makes the ultimate outlook for this patient bad is the constant shedding of tubercle bacilli from the wall of the cavity with the ever present danger of bronchogenic dissemination and spread of disease. It is this bad mechanical end result that our treatment must aim to prevent or correct. The danger is not the cavity but the positive sputum. Some form of compression therapy is indicated and this must await the completion of the acute stage.

The ultimate goal is a negative sputum and if this is not achieved by the use of pneumothorax some other form of compression therapy must be used, notably thoracoplasty or apicolysis. The authors' experience with phrenic neurectomy has been totally disappointing.

Case 7: A young woman, 25 years of age, who had been chronically ill a year and six months. Admitted to Metropolitan Hospital, June 9, 1931, complaining of cough, expectoration and repeated hemoptysis, having had a severe one just before her admission to the hospital. The whole left lung was involved with multilocular cavities; her sputum contained many bacilli. Collapse of the left lung by pneumothorax had failed because of obliterate pleuritis. *x-Ray* examination of October 29, 1931, demonstrated an extensive tuberculous lesion involving the whole left lung, with the trachea and

mediastinum pulled into the left thorax and a sharp rise of the left diaphragm. There was narrowing of the intercostal spaces throughout the whole left thorax.

A paravertebral thoracoplasty was performed in two stages by Dr. Coryllos. The general condition of the patient is improved. There has been little expectoration, with this little negative for tubercle bacilli. This is an excellent example of the importance of surgery changing the prognosis from a very poor to a most favorable one.

The Treatment of Acute Forms of Pulmonary Tuberculosis, Am. Rev. of Tuberc., Oct., 1933.

—————R—————

THE PHYSICIAN'S LIBRARY

COMMON CONTAGIOUS DISEASES, by Philip Moen Stimson, A.B., M.D. Associate in Pediatrics, Cornell University Medical College; Attending Physician, Willard Parker Hospital; Chief of Staff, the Floating Hospital of St. John's Guild; Chief of Clinic, Department of Pediatrics, Cornell Clinic. 12 mo, 353 pages, with 40 engravings and two plates. Lea & Febiger, Philadelphia. Limp binding, \$3.75, net.

A new clinical guide for practitioners, specialists in children's diseases, health officers, school and industrial physicians, internes and nurses. In this compact handy manual are concise comprehensive, definite, sound and helpful instructions for handling all of the more common communicable diseases. It is well and clearly written and contains, besides its discussions of the diseases, important material on the principles of contagion, on serum reactions and on the general management of contagious diseases in the hospital, the school and the home. A ready reference volume for the general physician who sees the majority of acute contagious diseases.—E.G.B.

HEALTH FACTS FOR COLLEGE STUDENTS, by Maude Lee Etheredge, M.D., Dr. P. H. Professor of Hygiene and Medical Advisor for Women, University of Illinois. 12mo of 342 pages, illustrated. W. B. Saunders Company, Philadelphia. Price \$2.00.

Dr. Etheredge in her sane approach to everyday health problems and the refreshing simplicity of her writing, has created a text-book in which the study of hygiene is made interesting. The chapter on mental health is clear, entertain-

ing and convincing. With like simplicity and force are driven home the important facts of nutrition and proper diet. The skin, eyes, feet, fatigue and rest, clothing, respiratory system, bones and muscles are each the subject of sections in which the steps of proper hygiene are clearly laid down and emphasized in the author's peculiarly impressive way—easy to understand, logical, pointing out the great rewards of good hygiene. Primarily, the advice is directed toward the student to derive the utmost in personal development—both physical and mental.—E.G.B.

PREVENTIVE MEDICINE, by Mark F. Boyd, M.D., M.S., C.P.H., Member of Regular Field Staff, International Health Division of Rockefeller Foundation; formerly Professor of Bacteriology and Preventive Medicine in the Medical Department of the University of Texas. Fourth Edition, Reset. Octavo volume of 532 pages with 150 illustrations. Philadelphia and London: W. B. Saunders Company, 1932. Cloth, \$4.50 net.

A volume which presents briefly the salient features of modern preventive medicine. The early chapters give a thorough consideration of diseases due to invading micro-organisms. Other sections include: Deficiency Diseases, Occupational Diseases, The Puerperal State, Heredity and Disease; Special Aspects of Hygiene and Sanitation, Demography and Public Health. The author does not claim originality for the material presented, and states all available sources of information have been freely utilized. However, the material is condensed to the point where the different subjects are discussed thoroughly, but briefly. Comparatively few statistical tables are included. Printed in large type on excellent paper. A fine book not only for those engaged in public health work, but also for the general practitioner.—E.G.B.

FETAL, NEWBORN, AND MATERNAL MORBIDITY AND MORTALITY: Publication of the White House Conference on Child Health and Protection. Royal 8vo. D. Appleton-Century Company, New York. 486 pages. Price \$3.00.

The report places emphasis on the incompleteness of general statistical information and urgently recommends changes in the present method of reporting births and deaths to overcome the difficulties that now exist in obtaining accurate information concerning fetal, newborn and maternal morbidity and

mortality. Certain facts of considerable importance could be brought out by the changes suggested. Although data are regarded as incomplete, the report considers morbidity and mortality rates for fetus and mother are unnecessarily high in the United States and that greater efforts should be made to improve the conditions which are responsible for this morbidity and mortality.

CLINICAL DIAGNOSIS. Physical and Differential. By Neuton S. Stern, A.B., M.D. (Harvard) Associate Professor of Medicine, University of Tennessee School of Medicine, Memphis. The MacMillan Company, New York. Price \$3.50.

This book is another of the many texts which have grown out of a teacher's experience in the class room. The author has taught clinical diagnosis in three divisions, and has so treated the subject in his book, viz:

1. Didactic "textbook" teaching of the technique of history taking and physical examination.
2. Practical history taking and physical examination, the patients being from the out-patient department.
3. Differential diagnosis.

Under the third division, the author discusses the technique of making a differential diagnosis and uses a series of cases for diagnostic practice. He also introduces under this head an alphabetically arranged list of signs and symptoms of various conditions, with their significance.

The book is a rather unique, and yet convenient, guide to the elementary study of this very important branch of medical training.—O.P.D.

—R—

Diseased Tonsils Are Not Aided by Home Medication

"Yes, Mother Sanford says Jimmie's father was just like this when he was a boy and 'worm medicine' cured him; so I got some 'worm powders' for Jimmie. . . . But really I can't see any improvement." So begins Dr. R. R. Rogers in his story of the examination of a thin, high-strung boy of 6 in the October Hygeia. It was evident after mother's explanation that Jimmie, who was ill, had been suffering the abuse of family medication. Cathartics, "worm medicine," and forced eating had helped to produce a rebellious, irritable boy. The doctor examined the boy, leaving to the last the examination of the mouth and throat, for this is always a touchy part in the examination of a child. The doctor found a ragged pair of tonsils, infected tonsils which had become a pus focus, steadily pouring into the blood stream bacterial toxins and waste materials derived locally from the dead tissues.

THE JOURNAL

of the

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EARLE G. BROWN, M.D. - - - Editor

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EDITORIAL

MEDICAL CARE OF INDIGENT

Immediately following the announcement by the Federal Emergency Relief Administration that physicians would be paid for rendering medical relief to unemployed, President Colt designated the Executive Committee to act for the Kansas Medical Society. A meeting was held on September 29, and a resolution adopted approving such program.

Following a conference with Mr. F. H. Marvin, Superintendent of Relief, on November 8, the following plan was formulated by the Executive Committee and forwarded to the Kansas Emergency Relief Committee:

"Each county or district medical society is to formulate and submit a code of fees for medical services as existing

on July first of this year in their respective communities, and agree on behalf of its members to reduce said charges 50 per cent for medical services rendered the indigent in the homes or in the physician's offices.

"That they also appoint an advisory committee from their membership to confer with the poor commissioner of their county in respect to any matters requiring adjustment.

"That each society shall mail the schedule of fees and their agreement as to the above reduction, together with the names and addresses of members of their respective advisory committee to Mr. F. H. Marvin, 501 National Reserve Building, Topeka, Kansas."

The Kansas Emergency Relief Committee approved the agreement as of December 2.

Therefore, county or district societies should immediately formulate their code of fees, as of July 1, and forward to Mr. Marvin.

AMEBIC DYSENTERY

Amebic dysentery, originally considered a tropical disease, but now frequently found in temperate zones, according to reports has assumed epidemic proportions in Chicago. From early in July of this year to November 9, 79 cases with seven deaths were identified in Chicago and 34 cases with eight deaths, having origin in Chicago, have been traced to other places. The diagnoses were confirmed in all cases by laboratory examinations. A further report as of November 23, gives the total as 302 cases, involving 96 cities, 265 carriers and 22 deaths.¹

During the period from January 1, 1930 to July 1933, inclusive, the average monthly incidence of amebic dysentery in Chicago, was less than two cases. However, on August 15, two cases were re-

1. Personal communication, November 23, 1933.

ported. On investigation, it was learned both patients had eaten at a certain hotel in Chicago. Examinations were made of the entire group of food handlers at this hotel and 13 clinical cases of amebic dysentery were discovered. Control measures were promptly instituted with isolation and treatment of all cases and carriers, and the prohibition of food handlers with positive stools from returning to work after treatment until they had three negative stool specimens at intervals of one week. It is understood similar control measures were extended to other food handling establishments in Chicago.

During the early weeks of the epidemic many of the cases were not recognized. Many cases were treated as "intestinal influenza, mucus colitis, appendicitis or ulcerative colitis." Many cases have been subjected to operation, in which the outcome was usually fatal.

The infective agent of amebic dysentery was first discovered by Loesch in 1873, although the relation to dysentery was not suspected until Kartulis found them in the endemic dysentery of Egypt in 1887.² The method of infection, of course, is by direct or indirect contact, and by food and drink contaminated with bowel discharges, or by flies. The period of incubation is unknown, although in experiments it has varied to 95 days. The cyst carrier, who does not present symptoms of dysentery, is apparently the principal source of infection in food-borne epidemics.

The disease is widely endemic in the tropics and subtropics; sporadically found in temperate regions. A survey by Boeck and Stiles of 8,029 individuals from all parts of the United States, resulted in the detection of the *Endameba histolytica* in 4.1 per cent.

The onset is usually sudden, with colicky pain and a desire to defecate.

There may be nausea and vomiting. A patient may have from 15 to 35 bowel movements in a 24 hour period; the first passages contain much mucus. Usually in from two to five days, the disease enters a more severe stage. There are attacks of severe abdominal pain; the stools become largely fluid, and are blood-streaked. Tenesmus is severe, the pain radiating up the small of the back; the patient becomes greatly weakened. This condition often becomes chronic, but between attacks the patient may be able to work.

A conclusive diagnosis may be reached on finding the organism in the stools. However, it may be necessary in some cases to use a rectal tube with numerous small holes in the sides to secure specimens. In some cases, numerous stool examinations are required to determine the presence of the infecting organism. Laboratory diagnosis of amebic dysentery was discussed on page 362, September 1933 issue of this Journal.

In treatment of the acute cases, Craig³ especially recommends the use of emetine, as emetine hydrochloride or emetine bismuth iodide. Other drugs which are of value include⁴: Chiniofon, acetarsone, iodochoxy-quinoline (vioform N.N.R.) and carbarsone.

Physicians should be on the alert for cases of this disease, especially those having possible origin in Chicago. Treatment should be instituted promptly and control measures used to prevent infection of others.

KANSAS INCOME TAX LAW

The Kansas Income Tax Law closely parallels that of the Federal government and forms for reporting income are as nearly like the Federal forms as possible. In most cases the figures required on the

3. Craig, C. F.: Amebiasis, in Musser. Practice of Medicine, 1932.

4. Jour. A.M.A., Nov. 18, 1933. p. 1641.

2. Boyd, Mark F.: Preventive Medicine, fourth edition, p. 125.

Kansas return may be taken from the taxpayer's retained copy of the Federal income tax return. There are many persons, however, whose income will be under the Federal exemptions, but in excess of the state exemptions who must prepare the Kansas return directly from their books and records.

Returns on a calendar year basis are due at any time after January 1, 1934, and become delinquent after April 15, 1934. Fiscal year returns are due on or before three and one-half months after the close of the fiscal year. Returns must include all income received on or after January 1, 1933.

Exemptions are \$750 for a single individual and \$1,500 for a married individual or the head of a family. An additional \$200 exemption is allowed for each dependent under 21 years of age, or any dependent incapable of self-support because mentally or physically defective. As to non-residents the exemption is that proportion of the above amounts which the income from Kansas sources bears to the total income from all sources. The individual tax is on the net income in excess of the exemptions at rates of from 1 per cent to 4 per cent. On the first \$2,000 above exemptions, the rate is 1 per cent; on the next \$1,000, 2 per cent; on the next \$2,000, 2½ per cent; on the next \$2,000, 3 per cent; and on income in excess of \$7,000 above the exemptions, 4 per cent.

According to Ellis D. Bever, director of the Income Tax Department:

"Gross income includes all commissions, bonuses, pensions, retiring allowances, fees, tips and similar items received for personal services rendered, except salaries, wages, pensions or retiring allowances paid by the United States. Gross income also includes the profit derived from the sale or other disposition of capital assets and may be received either in cash or property.

"In computing net income, deductions are allowed as follows: Ordinary and necessary business expenses; interest paid on indebtedness, except on indebtedness incurred or continued to purchase or carry nontaxable obligations or an annuity; taxes paid, except income taxes paid under the provisions of this Act, income taxes paid to another state, and taxes assessed against local benefits of a kind tending to increase the value of the property assessed; business losses sustained during the taxable year and not compensated for by insurance or otherwise; losses arising from fires, storms or other casualty, or from theft if not compensated for by insurance or otherwise; debts ascertained to be worthless and charged off during the taxable year; a reasonable allowance for the exhaustion wear and tear of property used in a trade or business, including a reasonable allowance for obsolescence; in the case of mines, oil and gas wells, other natural deposits, and timber, a reasonable allowance for depletion and for depreciation of improvements according to the peculiar condition in each case; and so-called charitable contributions as specified in section 6 (a), (9), not exceeding 15 per cent of the net income.

"Business expenses of a professional man includes all expenses of running the office, including the salaries of nurses, stenographers, assistants, traveling expenses, the expense of attending professional conventions, dues to professional organizations, subscriptions to medical magazines and depreciation of office equipment, provided such equipment was not charged to expense when purchased. In the case of a professional man who rents property for residential purposes, but incidentally receives clients, patients or callers in connection with his professional work (his place of business being elsewhere) no part of the rent is deductible as a business expense. If, however, he uses part of the house for his office, such portion of the rent as is properly attributable to such office is deductible.

"The cost of postgraduate studies of a professional man are not deductible as

a business expense. Where an automobile is used partly in business and partly for personal uses an accurate account of the expenses must be kept if any portion thereof is to be allowed as a business expense. The expense of operating an automobile entirely for business or professional purposes is deductible. Bad debts are deductible if the income was reported on the accrual basis when the account was placed on the books. Failure to collect anticipated bills or charges does not give rise to a deductible loss.

"Personal and living expenses are not deductible from gross income. Expenses of traveling between a taxpayer's residence and his place of employment, traveling expense not connected with business, campaign expenses or contributions to campaign funds of any political party or candidate, dues to fraternal orders, social clubs, luncheon clubs, lodges or similar organizations, and wages of servants employed for household work are personal expenses and are not deductible. Rent, repairs, depreciation or insurance premiums on the taxpayer's personal residence or property or premiums paid for life insurance by the insured are not deductible expenses. Alimony or an allowance paid under a separation agreement are not deductible.

"On or before March 1, 1934, every individual doing business or owning property in Kansas must file an information return with the Tax Commission showing all payments of salaries, wages, interest, dividends, rents, commission, etc., aggregating \$750 or more during the calendar year immediately preceding, to any resident person, partnership, fiduciary or corporation. Forms for reporting such information will be supplied upon application to the Tax Commission. Upon failure to report payments made, the Tax Commission may disallow the payments as deductions or credits in computing the tax of the payer, or impose a penalty not to exceed \$500.

"For wilfully making a false or fraudulent return there is a penalty of not more than \$5,000 nor less than \$2,000 and imprisonment at hard labor for not more than five years nor less than one year.

If a taxpayer, who has failed to file a return or has filed an incorrect or insufficient return, fails or refuses to file a return after notice from the Tax Commission, or files a fraudulent return, the Tax Commission shall determine the income of the taxpayer from its best information and assess the same at not more than double the amount so determined. If a taxpayer, without intent to evade the tax imposed, fails to file a return or pay the tax due at the time required, but voluntarily files a return and pays the tax within 60 days after such due date, a penalty of five per cent, plus interest on the tax at the rate of one per cent per month, will be assessed. In the event of failure to voluntarily file a return within 60 days, the tax found to be due will be doubled and such doubled amount increased by one per cent per month."

EDITORIAL COMMENT

The next meeting of the Board of Medical Registration and Examination will be held at the Hotel Kansan, Topeka, December 12 and 13, 1933.

Dr. Leonard S. Willour, McAlester, has been named Secretary-Treasurer-Editor of the Oklahoma State Medical Association, vice Dr. Claude A. Thompson, deceased.

Dr. George Crile in an address before the American Association for the Advancement of Science stated more than one million surgical operations are performed annually in the United States.

At the annual meeting of the American College of Surgeons in Chicago, Dr. J. Bentley Squier, of New York, succeeded Dr. W. D. Haggard of Nashville, Tennessee, as president. Dr. Robert B. Greenough, Boston, was named as president-elect.

It is reported that an antidote for bichloride of mercury poisoning has been discovered by Dr. S. M. Rosenthal of the National Institute of Health, Washing-

ton, D. C. The new antidote is formaldehyde sulfoxylate, and is given by mouth and intravenously.

The Committee on Scientific Research of the American Medical Association invites applications for grants in aid of research on problems bearing on the clinical aspects of medicine and surgery. Inquiries may be addressed to the committee at 535 North Dearborn Street, Chicago, Illinois.

The Department of Justice reports that five out of seven types of crimes have been more frequent this year than in 1931. The types which were found to be on the increase and the per cent of gain over 1931 were: Murder and non-negligent manslaughter, 10; burglary, 15.8; rape, 8.7; aggravated assault, 10.9, and larceny and theft, 7.4.

The American Association for the Study of Goiter, for the fifth time, offers \$300 as a first award, and two honorable mentions for the best essays based upon original research work on any phase of goiter presented at the annual meeting in Cleveland, Ohio, June 7, 8, and 9, 1934. Competing manuscripts must be in English, and submitted to the Corresponding Secretary, J. R. Yung, M.D., 670 Cherry Street, Terre Haute, Indiana, not later than April 1, 1934.

Smillie states that, in a study of more than a thousand persons, type I and II pneumococci were found to be much more prevalent in the nasopharynx in immediate family contacts of cases of lobar pneumonia due to the homologous type than in the population at large. The studies indicate that epidemics of family colds have some relationship to the prevalence of homologous types of pneumococci in contacts of lobar pneumonia due to type I and II. (*Jour. A.M.A.*, October 21, 1933.)

Application blanks are now available for space in the Scientific Exhibit at the Cleveland Session of the American Medical Association, June 11-15, 1934. The Committee on Scientific Exhibit requires all applicants to fill out the regular application form and requests this be done as early as convenient. The final date for filing applications is February 26, 1934. Any persons desiring to receive an application blank should address their request to the Director, Scientific Exhibit, American Medical Association, Chicago, Illinois.

Beginning with the next academic year, 1933-34, the Royal Italian Universities, in admitting to their medical schools students from colleges and universities in the United States will require the applicant to have completed the regular pre-medical course (four years) in any college of recognized good standing in this country. Any students who are not permitted to continue their studies in any of the recognized medical schools in the United States because of failures, will not be admitted to the Medical Schools in the Royal Italian Universities.

A comprehensive investigation on the effect of the depression on the earnings and health of families in the wage-earning class in typical American cities is being completed by the Milbank Memorial Fund and the United States Public Health Service. Preliminary reports show that for every four families who in 1929 had earnings of less than \$1,200 a year, there were in 1932, 11 families below that income level. For every eight families who earned more than \$3,000 in 1929 there was only one in 1932 whose earnings were above that amount. The entire investigation covers 15,000 families of approximately 65,000 individuals in 10 cities.

THE LABORATORY

Edited by
J. L. LATTIMORE, M.D., Topeka

Nephritis

It is a well known fact in many cases the urine shows very little and the blood no change, until there has been considerable damage to the kidneys and body tissues.

Albumin and casts in the urine still remain the most important constant and classical sign of a nephritis, however their presence tells us very little as to the extent of the nephritis and often they are present in such small amount they are overlooked in the routine examination. Urine will solidify when boiled if it contains as much as two per cent of albumin.

The phenolsulphonphthalein test does not show an early nephritis. Further, there are certain fallacies in this and other functional kidney tests, such as a normal excretion in acute nephritis. In some cases the phenolsulphonphthalein is partially stored in the liver.

The nitrogen bearing constituents of the blood are the proteins (albumin and protein) and the various non-protein nitrogen substances (unutilized food derivatives, waste metabolic products) are mainly urea, uric acid, creatinine, ammonia and amino acids. The term non-protein nitrogen includes all of the nitrogen remaining in the blood after the precipitation of the proteins.

The exact metabolism of nitrogen is not known. Nitrogen obtained from the food stuff is carried to the various body tissues by the blood. The nitrogen produced by the body metabolism is carried by the blood to the kidneys, where it is excreted normally in the urine.

A very high protein diet will cause in a very short time, an increase in the NPN which is spoken of as the "digestive rise and fall." Of practical importance is the fact that the fall is slower than the rise. Also of further practical importance is the consideration of the diet and the time of food intake, in relation to the time of collection of blood for chemical examination. On the ordinary

mixed diet, an accurate test will be obtained if the patient has refrained from food for 6 to 15 hours.

The normal NPN is somewhat variable because it is influenced by numerous factors. However, we know that 25 to 30 mgm. per cent is the high normal. The total NPN is divided in the normal person about as follows: Urea-nitrogen 12 to 15 mgm. per cent; uric acid one to four mgm. per cent; creatinine one to two mgm. per cent, while the balance is composed of several waste nitrogenous products. Through an error of interpretation for several years, many physicians started speaking in the terms of urea, instead of urea-nitrogen. Urea is obtained by multiplying the urea-nitrogen by the factor 2.14.

Technically, the total NPN is just as simple and probably slightly more so, to test for than the urea-nitrogen, but more value and information is obtained from the urea-nitrogen determination than from the total NPN. Urea-nitrogen is the first of the nitrogenous waste products to be increased. Theoretically, any increase in the urea-nitrogen would be reflected in the total NPN, that the proportionate increase would be the same. This part is certainly true, yet there may be variations in the other total NPN products which we are not testing for, which would give us an erroneous application of the findings.

Common causes of elevated urea-nitrogen and total NPN include: Prostatic obstruction; acute and subacute glomerular nephritis; chronic diffuse nephritis; congenital polycystic kidney; pyelonephritis; pyonephritis; hypertensive cardiovascular disease; certain heavy metal poisons and dehydration.

Creatinine determination is used altogether as a prognostic procedure. Most laboratories have a rule that a urea-nitrogen or NPN of over a certain amount shall also have a creatinine determination. My rule is any urea-nitrogen that is over 30 mgm. per cent shall have a creatinine. A creatinine above 5 mgm. per cent (excluding acute poison nephritis), is indicative of a fatal termination.

RECENT MEDICAL LITERATURE

Edited by
WILLIAM C. MENNINGER, M.D., Topeka

THE MANAGEMENT OF CASES OF ACUTE
INTESTINAL OBSTRUCTION

The management of cases of acute intestinal obstruction has not kept pace with the increase of knowledge of the subject. Early recognition of the condition is of paramount importance. A block in the continuity of the bowel can be identified by the auscultatory evidence of intestinal colic. All instances of strangulation obstruction are to be subjected to immediate operation. It is safer to exteriorize a devitalized segment and establish the continuity of the bowel secondarily than to effect a primary anastomosis after resection.

In cases of acute simple intestinal obstruction decompression can be performed by suction siphonage with a nasal catheter. Adhesive obstruction is often particularly amenable to relief by this method. Many patients with late simple obstruction can be improved as operative risks by preliminary decompression with the duodenal tube and suction. Inspection of roentgen films of the abdomen is suggested as the best way of determining whether the decompression is progressing satisfactorily. Of twelve cases of acute simple obstruction observed since the above method was used, successful decompression was obtained in nine. In two cases in which drainage by catheter was not successful, enterostomy was done although in one of these satisfactory decompression was obtained by suction alone. Decompression has also been employed successfully in several instances of subacute and chronic obstructions and as an auxiliary agent after the operative relief of strangulation obstructions. In obstructions of the left half of the colon (usually carcinoma) with ballooning of the proximal colon with gas, the method is not recommended, in such instances cecostomy or appendicostomy should be done.

The operative treatment of acute intestinal obstruction is reviewed and the method of performing enterostomy is described. Spillage or contamination dur-

ing the operative manipulations is synonymous with failure.

The value of saline solution and transfusion of blood in this treatment is reviewed.

Therapeutic Considerations in the Management of Acute Intestinal Obstruction. Wangenstein, Owen H. Archives of Surgery 26:933-961. June, 1933.

ELECTRIC SHOCK

The literature on electric shock is reviewed and the record of 27 cases presented with the following conclusions: 1. Death from electric shock depends upon the current, the various factors which determine the path of the current, and also upon the susceptibility of the organism. 2. Death from electricity in higher animals is probably due to primary fibrillation of the ventricles. 3. Post mortem findings fail to reveal the cause of electric death. Heat rather than electrolysis is believed responsible for the pathological changes. Changes in the vessel walls are noteworthy. 4. Treatment for electrically induced failure of the respiratory center is artificial respiration by prone pressure method until breathing is reestablished or death occurs. 5. The treatment of ventricular fibrillation is cardiac massage, preceded if possible by intraventricular injection of potassium salts followed by calcium salts. An appropriate electric current passed through the heart may overcome fibrillation. 6. The value of artificial respiration as a life saving measure in unconsciousness produced by a current is overestimated. In 82 per cent of the cases reported, death occurred despite the use of prolonged artificial respiration. 7. Stimulating hypodermics, countershock, and inhalation of pure oxygen are not advised, but carbogen is valuable and a lumbar puncture may be helpful in some cases. 8. Electric burns are treated by radiant and ultraviolet radiation rather than ointments or dusting powder. Debridement and skin graft have been successful in a few cases. 9. Sequelae of electric shocks are many and varied. The most important ones affect the skeletal and nervous systems.

Electric Shock. Pearl, Felix L., Archives of Surgery 27:227-249. August 1933.

TRYPARSAMIDE TREATMENT OF NEUROSYPHILIS

The author reviews experimental work and clinical experience in the arsenical treatment of neurosyphilis. The inefficacy of the older compounds and the questionable action of arsphenamine are brought out. Tryparsamide, while its actual spirocheticidal power is low, has a high therapeutic potency in neurosyphilis. Fever therapy has become the treatment of choice in neurosyphilis when possible; sometimes it is effectual when tryparsamide fails. The ideal treatment is a combination of the two. Serologic changes are more difficult to obtain than clinical improvement, although they occur in many cases, more often in meningo-vascular syphilis than in paresis or tabes. A preliminary trial course of tryparsamide is a valuable aid to determining the optimum therapy for the individual patient. In 341 cases of general paralysis clinical arrests or remissions are recorded in 54 per cent. In 306 cases of meningovascular syphilis, clinical or serological cures were obtained in 78 per cent. Mention is made of the danger of toxic amblyopia, but it is considered that some cases, with visual changes, may be treated beneficially if scrupulous ophthalmologic criteria are followed in selecting the cases. Dosage and duration of treatment must be adjusted to the individual but a simple routine is suggested. The author feels that tryparsamide is an encouraging addition to the therapeutic armamentarium against neurosyphilis, but feels that the ideal treatment is still forthcoming.

Tryparsamide in the Treatment of Neurosyphilis. Reese, Hans H. *Journal of Nervous and Mental Diseases*. 78:354-361. October 1933.

SPINAL ANAESTHETICS

Cocaine was first used as a spinal anesthetic but its high toxicity precludes its use. It was supplanted by tropacocaine hydrochloride, stovaine, procaine hydrochloride and others. Tropacocaine has been used rather extensively in the past but because of its high toxicity and uncertain analgesia, it has been discarded.

Stovaine came into general use in 1906

and was very popular; it is powerful and produces muscular relaxation, but it is very irritating to the nerve fibers and often produces severe after headaches; moreover, the drug deteriorates rapidly except when kept in special containers. Spinocaine was popular five or six years ago but requires an extremely rigid technique.

After a careful survey, the Boston City Hospital confined its study to the following four: procaine hydrochloride, neothesin, nupercaine, and pantocaine. Pantocaine was found least toxic and procaine hydrochloride next. Of these two drugs pantocaine offers everything that procaine hydrochloride can accomplish and has the advantage that it does not lower the blood pressure as does procaine. Moreover, it produces a longer and more satisfactory anesthesia.

Present Status of Various Spinal Anesthetics and Their Clinical Usefulness. Marvin, Frank W., *Journal of the American Medical Association*. 101:1475-1477. November 4, 1933.

THE DIAGNOSIS OF CARCINOMA OF THE COLON

Although the subject of carcinoma of the large bowel has received much attention in the past few years, the symptoms of the disease as described in many text books are so numerous as to be confusing. To clarify the subject a group of 53 typical cases are reviewed and the symptoms and a differential diagnosis given.

The paper is summarized as follows:

1. Carcinoma of the colon is a disease of middle and late life.
2. The chief symptoms are abdominal discomfort and loss of weight.
3. Partial obstruction with its characteristic symptoms is usually present.
4. Acute ileus is an important symptom in malignancy of the left side of the colon.
5. Roentgen ray examination should be helpful when both films and fluoroscope are used.
6. The disease must be differentiated from: (1) Chronic diverticulitis; (2) chronic ulcerative colitis; (3) peritoneal abscess; (4) pelvic and ovarian disease; (5) hyperplastic tuberculosis, and (6) granuloma.

The Diagnosis of Carcinoma of the Colon. White, William Crawford. *American Journal of the Medical Sciences*. 186:665-670. November 1933.

PERSONALS—NEWS ITEMS

Syracuse: Dr. C. B. Grissom has been appointed health officer for Hamilton County.

Marysville: Dr. H. H. Woods has removed to Topeka. He will limit his practice to radiology.

Ulysses: Dr. H. H. Miner attended the Kansas-Kansas State football game at Lawrence, October 28.

Atchison: Dr. William K. Fast has been named as health officer of Atchison County and also Atchison City health officer.

Junction City: Dr. H. R. Ross has been elected president of the Kansas Association of State and Municipal Dairy Inspectors.

Wichita: Dr. J. S. Hibbard is back in his office after several weeks illness. During his absence Dr. Hibbard's son, James, assisted with his practice.

Kansas City: Dr. L. B. Gloyne is closing his office in Kansas City, Mo., December 1 and confining all of his work and attention to his practice in Kansas City, Kan.

Kansas City: Dr. C. Omer West, president of the Wyandotte County Medical Society this year, was recently installed as commander of the Rosedale American Legion Post.

Wichita: Dr. E. C. Duncan was a visitor at the November 21 meeting of the Sedgwick County Medical Society, and took part in a discussion on the Federal Relief Administration.

Kansas City: Dr. L. D. Mabie has been confined in Bethany Hospital for the past few days with an illness which he feels would yield more promptly to treatment if he had fewer consultants.

Kansas City: Dr. L. L. Bresette, president of the Community Chest Organization, recently completed a very success-

ful campaign and was able to go over the top on the quota set for the relief work.

Wichita: Dr. H. N. Tihen, Dr. Hal E. Marshall, and Dr. A. W. Feghtly journeyed to Great Bend, on November 10, where Doctor Tihen presented a talk on Medical Organization. About 60 physicians were present.

Washington: The Washington County Medical Society has reorganized with the following officers: F. H. Rhoades, Hanover, president; H. L. Snyder, Greenleaf, vice-president, and Donald A. Bitzer, Washington, secretary-treasurer.

Kansas City: Dr. C. C. Nesselrode and Dr. L. G. Allen have developed an avocation to the point where they, with the assistance of their sons, were able to walk off with some of the blue ribbons from the American Royal Stock Show last week.

Topeka: Dr. Sidney I. Schwab, Professor of Neuropsychiatry, Washington University School of Medicine, was guest of honor at a dinner given by the staff of the Menninger Clinic on November 29. The dinner was held at the clinic hospital building and approximately 60 physicians from Kansas, Missouri, Nebraska, Oklahoma and Texas were present.

Topeka: Ross L. Laybourn, has been named as Bacteriologist in Charge of the Public Health Laboratory of the state board of health. Mr. Laybourn received his Bachelor of Science degree from Washburn College, and Master of Science from Iowa State College. For the past eight years he has held the position of Bacteriologist in Charge of the Missouri State Public Health Laboratory.

Topeka: The mid-winter meeting of the Council will be held at the Hotel Jayhawk in Topeka on January 8. Members will be guests at the regular monthly meeting of the Shawnee County Medical Society to be held that evening. Dr. H. N. Tihen will be the guest speaker, giving some of his observations on his trip to Vienna. The subject of his discussion will be "Medical Medley" and the moving picture "Some Old Grecian History."

BIRTHS

Hutchinson: Dr. and Mrs. Edward L. Fitzgerald, October 10; a son, Edward Lawrence.

Lawrence: Dr. and Mrs. Parke H. Woodard, October 14; a son, Donald Burns.

Salina: Dr. and Mrs. B. A. Brungardt, October 6; a daughter, Zita.

Wichita: Dr. and Mrs. Howard C. Curtis, October 26; a daughter, Caroline.

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COUNTY SOCIETY NEWS

FRANKLIN COUNTY MEDICAL SOCIETY

The Franklin County Medical Society met in regular session Wednesday night, October 25 and elected the following officers for the year 1934: Dr. W. J. Scott, president; Dr. H. J. Terrill, vice-president; Dr. Lerton V. Dawson, secretary-treasurer.

LERTON V. DAWSON, Sec-Treas.

THE LYON COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Lyon County Medical Society was held at the Newman Hospital, Tuesday, November 7, at 7:30 p. m., following the usual dinner.

Dr. Frank Foncannon, essayist of the evening, presented a short paper in which he discussed "Reduction of Intracranial Injuries" and "Reduction of Fractures Under Local Anesthesia." He exhibited x-rays from several cases which he had cited.

The remainder of the evening was de-

voted to moving pictures, the subjects of which were: "Open Thoractomy"; "Closed Thoractomy"; "Reduction of Intussusception", and "Around the Fair" with Burton Holmes.

Twenty-two members and three guests were present.

D. R. DAVIS, M.D., Secretary.

SHAWNEE COUNTY MEDICAL SOCIETY

The regular monthly meeting of the Shawnee County Medical Society was held at the Topeka State Hospital, November 6. President Marvin Hall presided.

Prof. J. F. Brown, of the Department of Psychology of the University of Kansas discussed: "The Psychological Viewpoint Regarding the Etiology of Mental Disease." Dr. M. L. Perry assisted by members of his staff presented the histories of five family groups showing the influence of heredity, and eight other groups of patients showing the influence of brain and nervous disease, other somatic diseases and vascular disease in the development of insanity.

The Public Relations Committee having conferred with Mr. Lyle Armel, Local Relief Administrator, made a report with certain recommendations in regard to medical care provided in the home to recipients of unemployment relief. The report was adopted.

Visiting guests included: Dr. W. M. Blount, Kansas City, member of the House of Representatives; Doctors J. D. Colt, Sr., Barrett Nelson, R. G. Schoonhoven and C. M. Siever, of Manhattan, and Doctors W. A. Carr and W. A. Smiley, Junction City.

More than 90 members and guests were present.

EARLE G. BROWN, M.D., Secretary.

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WYANDOTTE COUNTY MEDICAL SOCIETY

Doctors H. R. Wahl and Russel M. Kerr, of the Pathological Department of the University of Kansas, conducted a pathological conference preceding the scientific program at each of the Wyandotte County Medical Society meetings. These discussions of the pathological meetings are very instructive. At the meeting of November 7th, a clinical program was presented by Doctors Don Carlos Peete, J. W. Faust, and W. J. Feehan, who discussed respectively, cases of Aortic Aneurysm and Aortic Murmur, Arthroplasty of the Elbow Joint, and Aseptic Necrosis of the Head of the Femur. Dr. L. F. Barney reported for his committee the material on hand from the states of New Jersey, New Hampshire, and Kentucky concerning the FERA. On November 10 a special meeting was arranged; stag dinner and short entertainment following.

At the meeting on November 21 Dr. R. G. Leland, Director of the Bureau of Economics of the A.M.A., spoke very interestingly on the present status of the FERA as it affects the members of the various medical societies, and also spoke very pertinently concerning the effect of contract practice and the attitude of various state societies on this matter. There was a very good attendance at this meeting and we were very much pleased with the representation of many of the counties in Kansas and western Missouri. In addition to the pathological conference, Dr. L. B. Spake presented for scientific discussion a paper on Infections of the Mouth. Dr. Barney reported again that no final action had been taken for the county society on the FERA code awaiting the action of the State Federal Relief Agent.

The Wyandotte County Medical Society will close what might be considered a very successful year with their meeting of December 19, at which time the election of officers for the ensuing year will take place. Plans for the Annual Banquet and installation of officers in January are under way.

O. W. DAVIDSON, M.D., Secretary.

DEATH NOTICES

CONNOR, JAMES A., Waverly, aged 55, died October 30, 1933, in Topeka, of diabetes mellitus. He graduated from College of Physicians and Surgeons, Kansas City, Kansas, in 1903. He was a former member of the Society.

DOOLITTLE, CHARLES A., Atchison, aged 65, died October 22, 1933, of chronic nephritis. He graduated from Kansas City College of Medicine and Surgery in 1916. He was not a member of the Society.

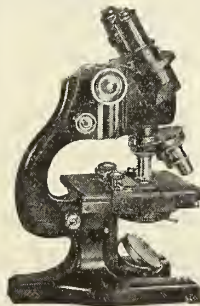
HAYS, DANIEL WEBSTER, Ensign, aged 79, died October 8, 1933, in Wichita, of senility. He graduated from Louisville (Ky.) Medical College in 1885. He was not a member of the Society.

ROBERTSON, ORRIN, Wichita, aged 75, died October 26, 1933, of cerebral hemorrhage. He was not a member of the Society.

ROFF, Ocran W., Newton, aged 66, died October 28, 1933, of broncho pneumonia. He graduated from University of Illinois College of Medicine, Chicago, in 1893. He was a member of the Society.

TIHEN, HERMAN BERNARD, Andale, aged 64, died October 15, 1933, of acute agranulocytosis. He graduated from University Medical College of Kansas City, Missouri, in 1893. He was not a member of the Society.

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KANSAS MEDICAL AUXILIARY

MRS. J. THERON HUNTER, Topeka
Chairman of Publicity

The activities of the Sedgwick County Auxiliary for the coming year were outlined at a meeting of the Board October 9 at the home of our president, Mrs. Henry Tihen. An enthusiastic group of committee chairmen met for a business session and tea. Programs and meeting places for the ensuing year were outlined.

A discussion of plans for the state meeting next May was held. Work will soon start on the plans for entertaining the state organization when the Kansas Medical Society convenes in Wichita for its 76th annual meeting. This meeting will mean work for the local organization and the services and cooperation of all members are essential to make this one of the best in the history of our state organization.

New committees and committee chairmen for the coming year are as follows:

PROGRAM

Mrs. J. E. Wolfe, chairman; Mrs. A. E. Gardner, Mrs. G. W. Kirby, Mrs. E. E. Tippin.

MEMBERSHIP

Mrs. G. A. Spray, chairman; Mrs. C. T. Hushaw, Mrs. W. J. Eilerts, Mrs. L. P. Warren.

SOCIAL

Mrs. Wilfred Cox, chairman; Mrs. F. L. Menahan, Mrs. H. E. Friesen, Mrs. E. A.

Pickens, Mrs. L. F. Bowman, Mrs. N. L. Rainey.

PUBLIC RELATIONS

Mrs. A. L. Crittenden, chairman; Mrs. V. L. Pauley, Mrs. Chas. Rombold, Mrs. E. J. Frost.

COOPERATIVE

Mrs. Fred McEwen, chairman; Mrs. J. W. Shaw, Mrs. Allen Olson, Mrs. A. E. Bence.

HYGEIA

Mrs. George E. Cowles, chairman; Mrs. W. T. Elhen, Mrs. C. N. Johnson, Mrs. W. J. Bierman.

PUBLICITY

Mrs. Hal Marshall, chairman; Mrs. H. F. Hyndman, Mrs. R. G. Koger, Mrs. C. D. McKeown.

LEGISLATIVE

Mrs. Earl Clark, chairman, Belle Plaine; Mrs. Willard Holt, Mrs. L. A. O'Donnell.

NOMINATING

Mrs. E. J. Nodurft, chairman; Mrs. D. W. Basham, Mrs. J. F. Gsell, Mrs. M. O. Nyberg.

ADVISORY COMMITTEE

Dr. C. A. Darnell, chairman; Drs. C. A. Parker, J. C. Brown, A. W. Fegty (term expires December 31, 1933), R. F. Shippey, Frank James, E. J. Nodurft, F. M. Anderson, C. R. Burkhead, Frank Emery (term expires December 31, 1934), and Willard Holt.

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The Woman's Auxiliary would like to extend to the wives of all doctors serving internships in Wichita hospitals a cordial invitation to attend any regular meetings. We assure you that you will be more than welcome and we shall consider it a pleasure to have you with us.

MRS. F. J. McEWEN,
Publicity Chairman.
—R—

TRUTH ABOUT MEDICINES

In addition to the articles enumerated in our letter of October 4 the following have been accepted:

Abbott Laboratories: Capsules Ephedrine Sulphate-Abbott, $\frac{3}{8}$ grain; Capsules Ephedrine Sulphate-Abbott, $\frac{1}{2}$ grain; Capsules Ephedrine Sulphate-Abbott, $\frac{3}{4}$ grain; Solution Ephedrine Sulphate-Abbott, 3%.
Lederle Laboratories: Tuberculin "O.T." (Old Tuberculin) 1 cc. vial package.

National Drug Co.: Gas Gangrene Antitoxin, Refined and Concentrated; Tetanus-Perfringens Antitoxin, Refined and Concentrated; Erysipelas Antistreptococcus Serum; Tuberculin Serial Dilutions (O.T.)—(Human Type). Schick Test Control.

The following product has been included in the List of Articles and Brands Accepted by the Council But Not Described in N.N.R. (New and Nonofficial Remedies, 1933, p. 437):

Merck & Co., Inc.: Guaiacol Carbonate-Merck.

New and Nonofficial Remedies

The following products have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in New and Nonofficial Remedies:

Petrolagar with Cascara (Non-Bitter).—Liquid petrolatum (New and Nonofficial Remedies, 1933, p. 255), 65 cc., emulsified with agar in a menstruum containing non-bitter fluid extract of cascara sagrada 13.2 cc., sugar flavoring, sodium benzoate 0.1 Gm., and water to make 100 cc. Petrolagar Laboratories, Inc., Chicago.

Radium Chloride-Radium Belge.—Supplied in the form of a mixture of radium chloride (New and Nonofficial Remedies, 1933, p. 342) and barium chloride containing 90 per cent or more of the radium salt. Radium Chemical Co., Inc., New York. (Jour. A.M.A., October 7, 1933, p. 1153.)

Aminophylline.—A double salt or mixture of theophylline and ethylenediamine, containing not less than 70 per cent of anhydrous theophylline (calculated to the dried specimen). Aminophylline has the actions and uses of theophylline and theophylline-sodio-acetate, over which it has the advantage of greater solubility. Like these it has a diuretic action, produces myocardial stimulation, and occasionally may be useful in relieving the pain of coronary disease.

Aminophylline-Pharmedic.—A brand of aminophyl-

line—N.N.R. It is supplied in the form of ampules solution aminophylline-Pharmedic, 0.24 Gm., 10 cc.; 0.48 Gm., 2 cc.; suppositories aminophylline-Pharmedic, 0.36 Gm., and tablets aminophylline-Pharmedic, 0.1 Gm. Pharmedic Corporation, Brooklyn, N. Y.

Aminophylline-Searle.—A brand of aminophylline—N.N.R. It is supplied in the form of ampules solution aminophylline-Searle, 0.24 Gm., 10 cc.; 0.48 Gm., 2 cc., and tablets aminophylline-Searle, 0.1 Gm. ($\frac{1}{2}$ grains). G. D. Searle & Co., Chicago.

Metaphyllin.—A brand of aminophylline—N.N.R. It is supplied in the form of ampules solution Metaphyllin, 0.24 Gm., 10 cc.; 0.48 Gm., 2 cc.; suppositories Metaphyllin, 0.36 Gm., and tablets Metaphyllin, 0.1 Gm. Adolphe Hurst & Co., New York.

Chloriodized Rapeseed Oil.—A halogenated rapeseed oil.—A halogenated addition product of rapeseed oil containing from 24 to 26 per cent iodine and from 7 to 8 per cent chlorine in organic combination. In the form of an emulsion, chloriodized rapeseed oil is used as a roentgenographic opaque medium in urography. It is marketed in the form of ampules Campidol Emulsion, 20 cc. Abbott Laboratories, North Chicago, Ill.

Benzedrine.—Racemic desoxy-nor-ephedrine.—Racemic benzylmethyl carbonamine.—A synthetically prepared racemic mixture of bases having the formula $C_6H_5CH_2CHNH_2CH_3$. Benzedrine produces local effects similar to those of ephedrine. Local application by means of a spray or dropper, or inhalation of the vapors of benzedrine or its carbonate produces shrinking of the nasal mucosa in head colds, sinusitis, vasomotor rhinitis, hay fever and asthma. It is marketed in the form of benzedrine inhaler, each tube containing benzedrine 0.325 Gm., oil of lavender 0.097 Gm., and menthol 0.032 Gm., and in the form of benzedrine solution which contains benzedrine 1 per

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Literature on request

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cent, oil of lavender 0.33 per cent, in liquid petrolatum. Smith, Kline & French Laboratories, Philadelphia, Pa.

Allergenic Extracts-Lederle.—The following allergenic extract-Lederle (New and Nonofficial Remedies, 1933, p. 27), marketed in dilutions representing respectively, 0.0005 mg., 0.005 mg. and 0.1 mg. of nitrogen per cubic centimeter, has been accepted. Fish Glue Allergenic Extract-Lederle. Lederle Laboratories, Pearl River, N. Y.

Diphtheria Toxin for the Schick Test (Diluted).—A diphtheria immunity test (Schick Test) (New and Nonofficial Remedies, 1933, p. 398) prepared by growing diphtheria bacilli in broth, aging and diluting with a solution containing sodium borate 0.36 per cent, boric acid 0.53 per cent, and sodium chloride 0.61 per cent. Merthiolate 1:10,000 is used as preservative. Marketed in packages containing sufficient material for 10, 25 and 50 tests. Hixson Laboratories, Inc., Johnstown, Ohio.

Staphylococcus Vaccine (Albus and Aureus)—This product (New and Nonofficial Remedies, 1933, p. 390) is also marketed in packages of one 5 cc. vial containing 2,000 million killed bacteria per cubic centimeter. (Jour. A.M.A., October 21, 1933, p. 1314).

Propaganda For Reform

Histeen.—“Histeen” is a newcomer in the “patent medicine” field. It is put on the market by the Histeen Corporation of Chicago. According to the state records Joseph B. Creevy is the president of the concern and also one of the three directors. The Histeen advertising declares that hay-fever and pollen asthma are due to histamine poisoning and that Histeen is a compound which “acts to counteract histamine poisons, neutralize its action and release the irritating effect of histamine.” From an analysis

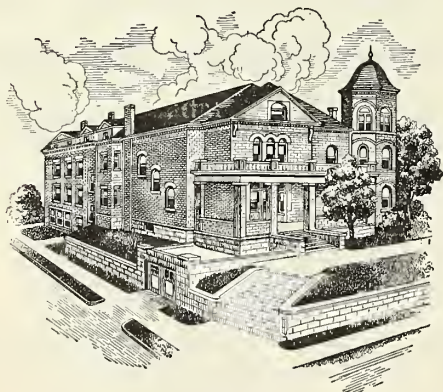
made in the A.M.A. Chemical Laboratory it seems that this “amazing new direct relief” has for its chief ingredient, making up nearly 60 per cent of Histeen, antipyrine, which has been used by physicians for nearly fifty years and has been prescribed for the purpose of giving symptomatic relief in certain forms of asthma and hay fever for almost as long. In addition it contains phenobarbital (Luminal), as well as ephedrine, a substance that enters into an enormous number of proprietary remedies for the symptomatic relief of hay fever and asthma. And this mixture of well known drugs is claimed to be the alleged discovery of a “Chicago specialist” who will not allow his name to be used because he is afraid of hurting his “ethical standing.” The statement is made that three tablets four times a day may be “taken with perfect safety as long as required.” Obviously, from the analytical work done, the person who takes Histeen gets 4 grains of antipyrine with each tablet, and where he takes three tablets four times a day he has a daily intake of 48 grains of antipyrine! He also gets in the same period about $2\frac{1}{2}$ grains of phenobarbital and about $1\frac{1}{2}$ grains of ephedrine. Summed up then, it seems that, essentially, Histeen is a secret mixture of three well-known drugs, all of them potentially dangerous in the hands of the untrained. Further, the nostrum is recommended in dosages that a physician with any regard for his patient's safety and his own reputation would hesitate to prescribe. (Jour. A.M.A., October 14, 1933, p. 1251.)

Mineral, Spring, Natural or Alkaline Waters.—The Committee on Foods reports that mineral, spring, natural or alkaline waters are usually advertised with unwarranted claims as to their health values. Analyses of most of these waters do not disclose explanations or evidence for remarkable curative properties. In case of potable mineral waters their min-

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eral content comprises traces only of commonly occurring salts present in substantially greater quantities in ordinary foods. Such characteristics as radioactivity or the presence of lithium in drinking water have not been shown to have useful effects. Strongly radioactive waters may be distinctly harmful. Natural waters contain only traces of lithium. Larger doses of lithium may be dangerous. The Committee reports further that therapeutic or curative claims for mineral waters that are not laxative are to be viewed with suspicion, and that the daily water requirements for health cannot be defined with any degree of exactness, as activity, temperature and other conditions influence the demands. (Jour. A.M.A., 1933, p. 1316.)

Vitamin A, Carotene and Cough Drops.—Vitamin D and irradiated ergosterol were at first the subject of widely varying claims and counter-claims. Today the advantages and limitations of the vitamin D carrying substances are rather well established. Now confusion and exaggeration distort our views of vitamin A and its precursor carotene. Some manufacturers promote vitamin A and carotene products without regard to lack of substantiation for the claims that are made. There is no clinical evidence that vitamin may be termed "anti-infective." Furthermore, there is absence of evidence that the national dietary is deficient in vitamin A. Carotene may possibly be harmful. Recent announcements have been made that the S.M.A. Corporation has agreed to supply carotene—regrettably called "primary vitamin A"—to the manufacturers of Smith Brothers Cough Syrup and Cough Drops (Drug Trade News, Oct. 1933). The products are now being heralded in extravagant advertisements in street cars. The observa-

tions of Hess, Clausen, and others show that there is no scientific basis on which any claim can be made for the rationality of including vitamin A in a cough syrup. THE JOURNAL knows of no evidence that the S.M.A. Corporation or the manufacturers of Smith Brothers Cough Syrup and Cough Drops have developed to show whether or not the carotene in cough drops maintains its potency; whether there is danger of carotinemia from the use of unlimited amounts of such products, or whether the amount of carotene claimed to be present is as effective in Smith Brothers Cough Drops as in milk. There is nothing to show the alleged advantage of adding vitamin A to cough syrup, or that it relieves cough. There is danger in dependence on such nostrums in the loss of precious time by those suffering with respiratory disorders who have been misled by this propaganda. No manufacturer of integrity, no firm with the prestige and background of the S.M.A. Corporation can afford to be associated with such meretricious quackery, whatever the financial return. The chief value of any cough drop is to keep one's mouth shut—and to yield a demulcent effect. For this purpose there are hosts of preparations on the market, sold without the hocus pocus and propaganda now connected with the so-called anti-infective vitamin. (Jour. A.M.A., October 28, 1933, p. 1394.)

The Federal Trade Commission.—The Federal Trade Commission has powers in the medical field that are not possessed by the Food and Drug Administration that enforces the Food and Drugs Act. It may investigate and take action in cases that involve or appear to involve unfair trade practices. Where such practices are proved, the Commission may either require the concern involved to sign a stipulation to

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the effect that the objectionable methods will be given up, or may issue what is known as a "Cease and Desist Order" in which the individual or company involved is ordered to cease and desist from practices that have been declared objectionable. Recently (July 17, 1933) the Commission published some facts in a series of stipulation proceedings involving misleading advertising practices. Among these were the following medical or quasi-medical products: Gallbladder cure (E. E. Paddock, Kansas City, Mo.); Sargon and Sargon Pills (G. F. Willis, Inc., Atlanta, Ga.); Natural Body Brace (The Natural Body Brace Co., Salina, Kansas); Formula Q (Harris H. Luntz, Brooklyn, N. Y.); Gaduettes (Gadurette Company, Battle Creek, Mich.); Drysorb (Drysorb Company, St. Louis, Mo.); Health Appliance and Corinthian Astringent Lotion (Health Appliance Company, Cleveland, Ohio); Conley Ointment (Conley Ointment Corporation, Muncie, Ind.); Viscose (Clason Viscose Company, Chicago); Relief Compound (The Southington Remedy Company, Kansas City, Mo.); Lecithin Tablets (Lecithin Company, Long Island City, (N. Y.); Prosager (Mid-West Products Company, Kalamazoo, Mich.); Ulticur (Ulticur Company, Inc., Chicago); Johnston's Golden S.O.S. Powder (Johnston Chemical Company, Fort Bragg, Calif.) (Jour. A.M.A., September 30, 1933, p. 1095.)

Lash-Lure.—A number of cases of severe poisoning, including one case of blindness, have been reported from the use of a so-called "Eye Brow and Lash Dye" sold by a Los Angeles concern under the trade-marked name "Lash-Lure." The indiscriminate distribution of dangerous drugs by irresponsible persons again emphasizes the need of an extension of

the powers of the National Food and Drugs Act. Lash-Lure, according to the A.M.A. Chemical Laboratory, contains a dye of the aniline type. The dangers of using hair dyes of the aniline type, even on the hair of the scalp, is well known to all reputable beauty parlors, and usually such dyes will not be applied if the patient exhibits any sensitivity to the substance. Yet in Lash-Lure we have a potentially dangerous product sold to be applied to the eyelashes. Whether the victims of this preparation have redress at law against either the exploiter of Lash-Lure or the individual beauty parlors responsible for applying it is a matter for the courts to decide. However, money is a poor recompense for the loss of sight. (Jour. A.M.A., September 23, 1933, p. 1016).

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